INSTALLATION AND SERVICE MANUAL

MF3800 MULTI-FUEL PARLOR STOVE

For Qualified Installers Only

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- **LEAVE THIS MANUAL WITH ANY PARTY RESPONSIBLE FOR INSTALLATION AND SERVICE.**
- **This stove should not be used as the only source of heat in the house. Power outages and periodic maintenance will result in a total loss of heat.**

HOT! DO NOT TOUCH. SEVERE BURNS MAY RESULT. CLOTHING IGNITION MAY RESULT.

Glass and other surfaces are hot during operation and cool down.

- Keep children away.
- CAREFULLY SUPERVISE children in same room as appliance.
- Alert children and adults to hazards of high temperatures.
- DO NOT operate with protective barriers open or removed.
- Keep clothing, furniture, draperies and other combustibles away.

Tested and approved for shelled field corn, approved pellets and cherry pits. Burning any other type of fuel voids the warranty.

Please read this entire manual before installation and using this multi-fuel-burning room heater. Failure to follow these instructions could result in property damage, bodily injury or even death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not overfire - If any external part starts to glow, you are overfiring. Reduce feed rate. Overfiring will void the warranty.
- Comply with all minimum clearances to combustibles as specified in the manual. Failure to comply may cause a house fire.

Check building codes prior to installation.

- Installation MUST comply with local, regional, state and national codes and regulations.
- Consult local building or fire officials about restrictions and installation inspection requirements in your area.
- Notify insurance company of parlor stove installation.

WARNING

PRIOR TO OPERATION, THIS UNIT MUST BE INSTALLED PROPERLY. FOR OPERATION AND MAINTENANCE PROCEDURES, SEE THE OPERATION AND MAINTENANCE MANUAL THAT COMES WITH THE STOVE OR CONTACT A CERTIFIED DEALER. STOVES SHOULD BE INSTALLED BY A QUALIFIED INSTALLATION DEALER.

OMMF3800IS
Rev. Date 11/17/10
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WARNINGS AND SAFETY PRECAUTIONS

- This stove is designed and approved for pelletized wood fuel, cherry pits, or corn with no more than 14% moisture.

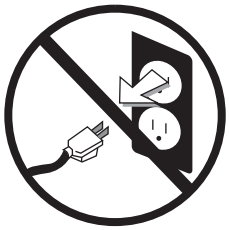
- Do not operate the stove if the flame becomes dark and sooty or if the firepot overfills with pellets. Turn the MODE SWITCH to "OFF" and periodically inspect the stove. Contact your dealer for more information.

- The exhaust system **must** be completely airtight and properly installed. The pellet vent joints, both vertical and horizontal, must be sealed with RTV 500^{O} F. (260o C.) silicone sealant.

- Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or keep a fire going in this stove. Such liquids should be kept well away from the stove while it is in use.

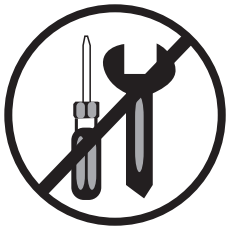
- When your Cumberland Stove is in use and operational, the viewing door and ash pan must be closed.

- Keep foreign objects out of the hopper. DO NOT shut down the stove by opening the hopper lid. This can cause an unsafe condition.



- If you suspect a problem or malfunction with the stove, do not unplug it. Turn the MODE SWITCH to "OFF" and periodically inspect the stove.

- This unit must be properly installed to prevent the possibility of a house fire. For proper installation, adhere strictly to the instructions in the installation and service manual. Do not use alternative methods or compromise in the installation.

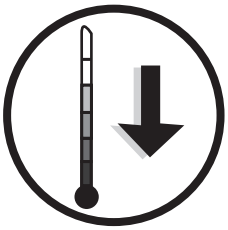


- Never try to service or replace any part of the stove unless instructions are given in this manual. This work should be done by a trained technician.

- This stove requires periodic maintenance and cleaning. Failure to maintain your stove can lead to smoke spillage in your home. Use an approved ash vacuum when cleaning your stove.

- Contact local building or fire officials about restrictions and installation inspection requirements in your area. Contact your local authority (such as municipal building department, fire department, fire prevention bureau, etc.) to determine the need for a permit. Notify your insurance company of parlor stove installation.

WARNINGS AND SAFETY PRECAUTIONS



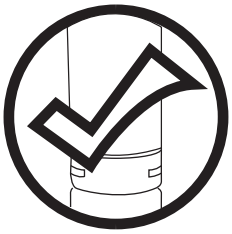
- Before cleaining or performing any service to your stove, ensure the stove has had time to cool. Ashes should be disposed of in a metal container with a tight lid and placed on a non-combustible surface well away from the home or structure.

- The stove will not operate during a power outage. Do not unplug the stove. The stove will return to range screen and must be reignited.

- This stove must be connected to a standard 115 V., 60 Hz grounded electrical outlet. Do not use an adapter plug or sever the grounding plug. Do not route the electrical cord underneath, in front of, or over the stove.

- Do not place clothing or other flammable items on or near the stove. Because this stove can be controlled by a thermostat there is a possibility of the stove turning on and igniting any items placed on or near it.

- Ardisam, Inc., grants no warranty, implied or stated, for the installation or maintenance of your stove, and assumes no responsibility of any consequential damage(s).



- The exhaust system should be checked twice a year minimum for any build-up of soot or creosote. Contact a servicing dealer for assistance.

- Disconnect the power cord before performing any maintenance. ***NOTE: Turning the Mode Switch to "OFF" does not disconnect all power to the heater.***

- Do not throw this manual away, as it contains important operating and maintenance instructions that you will need at a later time. Always follow the instructions in this manual.

- Do not touch the hot surfaces of the stove. Educate all children of the danger of a high-temperature stove. Young children should be supervised when they are in the same room as the stove.

- This stove is approved for mobile homes. According to HUD (Housing & Urban Development) requirements, when installed in a mobile home, this stove must be grounded directly to the steel chassis of the mobile home and bolted to the floor. Direct air access must be provided—use a Fresh Air Kit. The structural integrity of the mobile home floor, wall, and ceiling/roof **MUST BE** maintained.

WARNINGS AND SAFETY PRECAUTIONS

- **DO NOT** burn garbage in this unit. The burning of other solid fuels such as cord wood or wood chips in this stove is not permitted. Burning any fuels in the stove that are not certified by Cumberland Stove Works will void the warranty.
- **DO NOT** install a flue damper in the exhaust venting system of this unit.
- **DO NOT** connect this unit to a chimney flue servicing another appliance.
- **DO NOT** install in a sleeping room.
- Proper installation of this stove is necessary for safe and efficient operation. Installing this product improperly may result in a house fire and personal injury. All applicable building codes for your location must be followed. In areas where building codes require additional steps to the installation of this product that are not included in the installation and service manual, the building codes have precedence and must be followed. Contact your local building inspector to obtain any necessary permits or inspection guidelines before installing the product.
- A working smoke detector is required and must be installed in the same room as the stove.
- This installation must conform with local codes. In the absence of local codes you must comply with ASTM E1509, (UM) 84-HUD, ULC/ORDC-1482.
- Keep combustible materials (such as grass, leaves, etc.) at least three (3) feet away from the flue outlet on the outside of the building.
- **This stove should not be used as the only source of heat in the house. Power outages and periodic maintenance will result in a total loss of heat.**

⚠ CAUTION

- Installation and repair of this parlor stove should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. It is imperative that control compartments, fire box, and circulating air passageways of the stove be kept clean.
- The operation of exhaust fans such as bathroom fans, attic fans, etc., might starve the parlor stove of combustible air creating a negative pressure in the room. The pressure switch may shut off operation of the parlor stove. For this reason, Cumberland Stove Works recommends using an outside air connection.
- The moving parts of this stove are propelled by high torque electric motors. These parts can cause severe damage to body parts that get near them. Keep all body parts away from auger and fans while the stove is plugged into an electrical outlet. These moving parts may begin to move at any time the stove is plugged in.
- If the electrical power fails while the stove is hot, keep all stove doors closed. DO NOT unplug.
- Vent surfaces can get hot enough to cause burns if touched. Noncombustible shielding or guards may be required.
- Install vent at clearances specified by the vent manufacturer.
- All venting joints, whether vertical or horizontal, should be made gas-tight with recommended sealants specified by vent manufacturer.
- Cumberland Stove Works, manufacturer of this appliance, reserves the right to alter its products, specifications and/or price without notice.

⚠ WARNING

NEVER SHUT THE STOVE DOWN BY LEAVING THE HOPPER LID OPEN. THIS CAN CAUSE AN UNSAFE CONDITION. ALWAYS USE THE OFF BUTTON TO SHUT DOWN THE STOVE.

INTRODUCTION

Congratulations on your investment in quality. Thank you for purchasing a Cumberland Stove Works Multi-Fuel Parlor Stove from Ardisam, Inc. We have worked to ensure that the multi-fuel burning stove meets the highest standards for usability and durability. With proper care, your stove will provide many years of service. Please read this entire manual before installation and use.

BURNING SOLID FUELS

Ashes need to be removed from the stove periodically. See the "Normal Care & Maintenance" section for cleaning procedure.

The parlor stove, due to the nature of solid fuels, will require brief periodic attention. A few moments of adjustment and cleaning from time to time is an important part of burning solid fuels.

This parlor stove has been designed to burn dry shelled corn, wood pellets and cherry pits.

SHELLED CORN

- **Corn must contain less than 14% moisture content.** Wet corn will rapidly deteriorate stove components, reduce efficiency and void all warranties. Purchase a moisture tester if in doubt.
- Corn must be clean and free from debris. Never burn corn right from the field. Damage caused by dirty corn is not covered by the product warranty. **Ask for screened corn only.** Stalk parts, excessive fines and cob remnants will clog the air flow holes in burn plate. Check the corn for foreign objects.
- Store the corn supply in a dry place and keep the bags or container sealed to prevent it from absorbing excess moisture. Test the moisture content periodically to ensure the proper dryness.
- There are many varieties of corn. Each variety has unique characteristics including the shape and size of the kernel. As corn characteristics change, the fuel range may have to change accordingly.

⚠ WARNING

NEVER BURN SEED CORN IN THE STOVE. SEED CORN IS TREATED WITH CHEMICAL PESTICIDES THAT ARE HARMFUL OR FATAL IF SWALLOWED. SEED CORN IS DANGEROUS TO HAVE IN THE HOUSE, ESPECIALLY WHERE CHILDREN CAN REACH IT.

NEVER BURN "DEER CORN". IT FREQUENTLY CONTAINS MOLASSES SUGARS.

DO NOT STORE ITEMS SUCH AS START PELLETS OR BURN GEL IN PARLOR STOVE OR WITHIN INSTALLED CLEARANCES OF PARLOR STOVE.

⚠ CAUTION

BURNING ONLY CORN WITH THE RECOMMENDED MOISTURE CONTENT WILL ASSURE LONGER STOVE LIFE AND LESS FREQUENT CLEANING.

⚠ CAUTION

CUMBERLAND STOVE WORKS DOES NOT RECOMMEND BURNING THE STOVE ON THERMOSTAT MODE, EITHER LOCAL OR REMOTE, WHEN BURNING CORN OR PELLET BLENDS. SPENT ASH MATERIAL WILL BUILD UP IN THE POT, INHIBIT THE IGNITOR FUNCTION AND CAUSE A VIOLENT IGNITION.

PELLETS

- As with corn, find a consistent pellet supplier. Pellets will vary in content and burn characteristics from supplier to supplier. A consistent supply of pellets will result in a more consistent and efficient burn.
- Before burning, check the pellets for foreign objects. The stove warranty will not cover damage done to the stove due to foreign objects in the fuel supply.
- Store the pellets in a dry place to prevent them from absorbing added moisture.
- To decrease dust build-up, the hopper will need to be vacuumed out after every 6-8 bags of pellets—more often if the pellets are poor quality. You may have to screen each bag of pellets if dust becomes a problem.
- **Wood pellets** are generally produced out of wood waste such as sawdust and shavings. The raw material is dried, mechanically fractioned to size and extruded under intense pressure into pellets. Wood pellets need to be protected from direct water penetration. If exposed to water droplets from condensation they will gradually decompose and loose their effectiveness as a fuel. The decomposition involves expanded volume, and over time, a gradual breakdown.
- **Cherry Pits** are the woody remains of processed cherries. This fuel can be found affordably in regions of the country that process cherries.

AUTOMATIC SAFETY FEATURES

POWER OUTAGE

During a power outage, the stove will shutdown safely. It will not automatically restart when the power returns. If the stove is still at operating temperature when power returns, the convection fan will vent the remaining heat out of the stove. See "Lighting Instructions" section for more information.

OVERHEATING

Over-Fire Protection: If the stove is being over-fired or burning too hot, the high limit switch will automatically shut down the stove to avoid damage to components. Allow the stove to cool at least one hour before relighting. The high limit switch is located behind the right access panel. To reset the high limit switch, first remove the right access panel **(SEE FIGURE A)**. Then press the square button in the middle of the switch. **SEE FIGURE B**.

Figure A: Removing panels

⚠ CAUTION

BURNING WOOD PELLETS ACCORDING TO RECOMMENDATIONS WILL ENSURE LONGER STOVE LIFE AND LESS FREQUENT CLEANING.

THE USE OF GRATES OR OTHER METHODS OF SUPPORTING THE FUEL IS NOT AUTHORIZED IN THIS PARLOR STOVE.

⚠ CAUTION

FOLLOW ALL DAILY, WEEKLY AND MONTHLY MAINTENANCE RECOMMENDATIONS FOR OPTIMUM PERFORMANCE.

⚠ WARNING

IF THE ELECTRICAL POWER FAILS ANY TIME WHEN THE STOVE IS HOT, KEEP ALL STOVE DOORS CLOSED.

THE AUTOMATIC SAFETY FEATURES MUST NOT BE BYPASSED.

WHEN RESETTING THE HIGH LIMIT, NEVER USE ANY CONDUCTORS AS THIS COULD CAUSE ELECTRICAL SHOCK AND/OR DAMAGE TO STOVE.

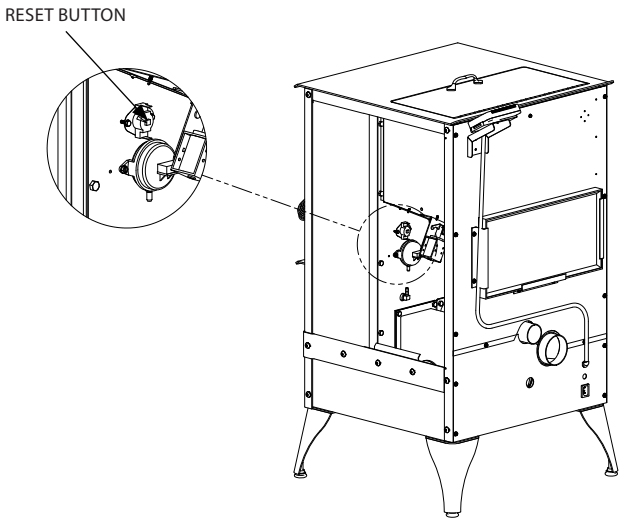
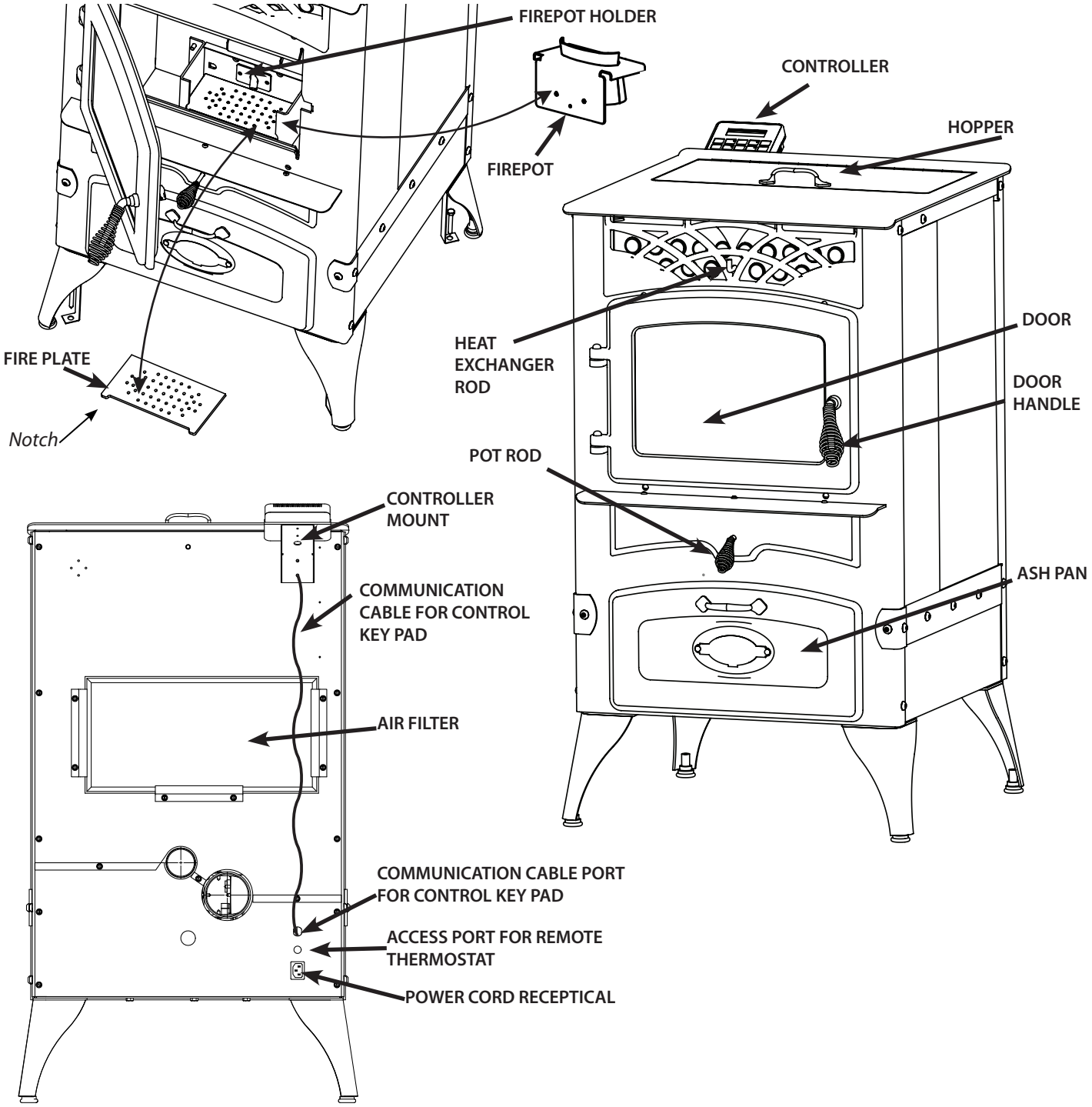


Figure B: High limit reset button in back panel

MAJOR STOVE COMPONENTS

Take a few moments to familiarize yourself with the major components of the Cumberland MF3800 Stove. Many of these items are referred to throughout the manual.



UNPACKING AND ASSEMBLY

Unpack all hardware located in the unit's hopper and ash pan. The following should be included:

4 - legs (710008) w/ levelers (725010)
4 - tie-down straps (700136)
1 - firepot cleaning rod (700076)
1 - cleaning rod spring (720053)
1 - hopper lid handle (730006)
1 - power cord (720045)
1 - door (700311) with glass (720002) and handle (700351, 700359)
1 - controller (730053)
1 - steel mounting bracket (700349)
1 - pre-made parts bag (small) which includes:
- 4 - 1/4-20 x 2" tie-down bolts (725015)
- 2 - 8-32 x 3/8" hopper lid handle bolts (725012)
- 12 - 5/16-18 x 3/4" leg bolts (1501)
- 4 - #8-18 controller bracket screws (725027)

MOUNT LEGS

NOTE: Stove can be installed with or without legs. If legless installation is preferred, you may skip this step.

NOTE: Stove is heavy. Team lifting is recommended.

1. Gently tilt the stove on its side.
2. Assemble the legs using provided (12) leg bolts **AS SHOWN IN FIGURE 1.**

   NOTE for MOBILE HOME INSTALLATION: If unit is to be used in a mobile home, you must install the (4) tie-down straps to the stove now. Refer to page 17 for instructions.
3. After all bolts have been tightened, set the stove back up on its legs.

MOUNT HANDLE TO HOPPER DOOR

1. Using a Phillips screwdriver, attach hopper handle to hopper door using the pre-drilled holes. **SEE FIGURE 2**.

ASSEMBLE FIREPOT CLEANING ROD

1. Thread spring over non-threaded end of rod.
2. Place threaded end of firepot cleaning rod through decorative casting and screw into firepot. **SEE FIGURE 3.**

NOTE: Firepot must seal tight when pushed in.

- The upper baffle (700202), **FIGURE 4,** is located in the top of the firebox.

PLUG IN POWER CORD

1. Plug power cord into the back of stove. **SEE FIGURE 5**.

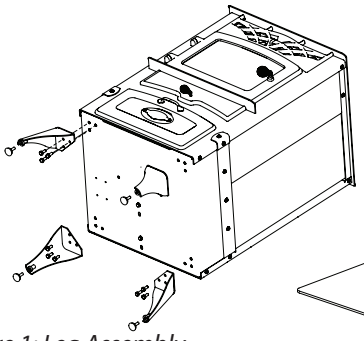


Figure 1: Leg Assembly

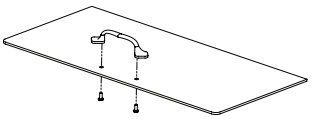


Figure 2: Hopper Door Handle Assembly

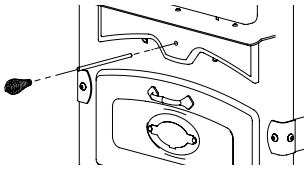


Figure 3: Ash Shuttle Rod Assembly

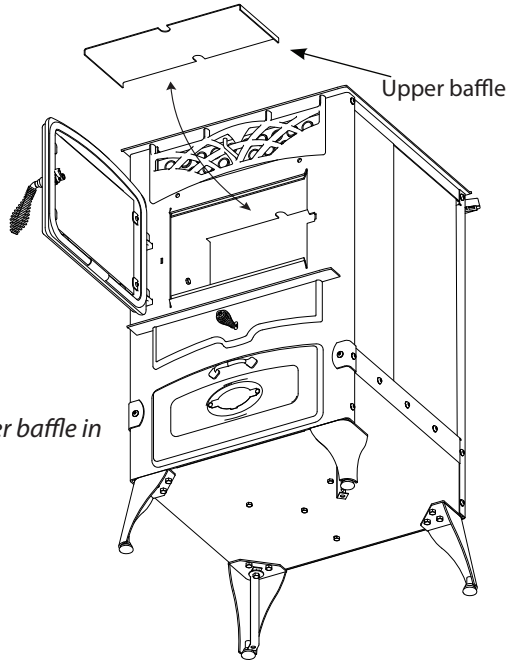


Figure 4: Upper baffle in top of firebox

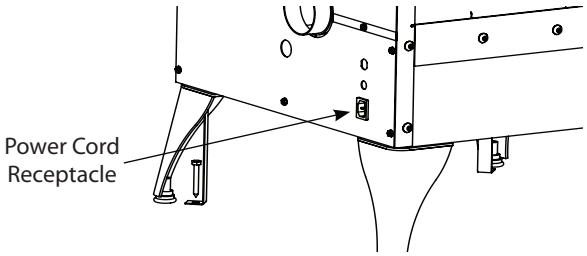


Figure 5: Power Cord Receptacle

MOUNTING THE CONTROLLER

The CSW MF Series Stove has three different controller mounting options:

1. *Back of the stove with controller visible:* You may mount the controller on either side of the rear of the stove (**FIGURE 6A**) so it is visible during operation. To do so, use the metal mounting bracket and the four (4) self-tapping screws (two (2) through the plastic bracket and two (2) through the back panel of the stove). Attach through the pre-drilled holes.

   Note: Self-tapping screws must penetrate hopper.

2. *Back of the stove with controller hidden:* You may mount the controller on either side of the stove (**FIGURE 6B**) so it is not visible during operation. Attach the plastic mounting bracket to the pre-drilled holes on either side of the stove using the (2) self-tapping screws.

   Note: Self-tapping screws must penetrate hopper.

3. *Wall mounted* **(FIGURE 8):** You may mount the controller on the wall next to the unit using two drywall screws. It is best to embed the screws into a stud. Use a stud finder to locate studs in the wall.

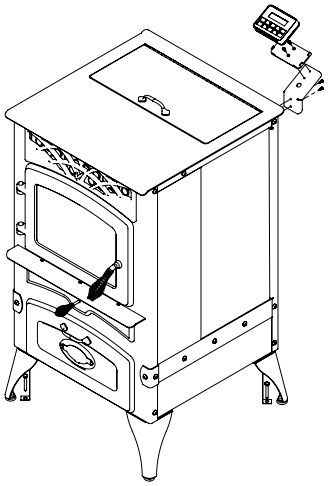


Figure 6a: Controller on metal bracket in back.

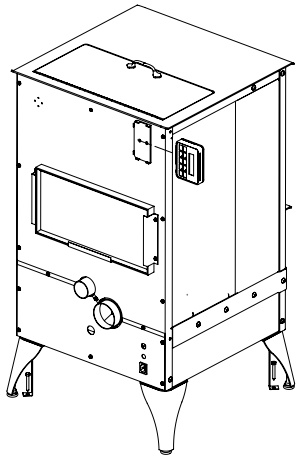


Figure 6b: Controller on plastic bracket in back.

INSTALLING REMOTE THERMOSTAT

The MF Parlor Stove can be run thermostatically by purchasing any thermostat (sold separately) that uses a mechanical switch. This step is optional and not required for MF Parlor Stove to operate.

Mount thermostat according to manufacturer specifications. Using a small flat head screwdriver, tighten remote thermostat wires into pins 7 and 8. **SEE FIGURE 9**.

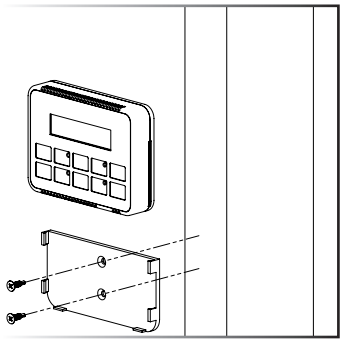


Figure 7: Controller on wall.

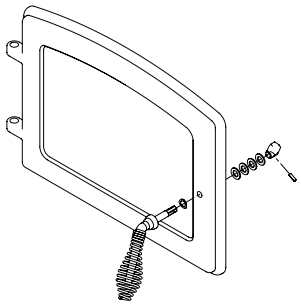


Figure 8: Door Latch Adjustment.

PLUG STOVE INTO CONTROLLER

After mounting the controller, plug the phone cord from the back of the stove to the underside of the controller.

MOUNT DOOR

Take off protective cardboard. Hang door on hinges making sure it's seated properly so the latch is aligned with the latch cut-out.

LATCH ADJUSTMENT

The door gasket may settle after use. Adjustment to the latch is necessary to ensure proper seal. To adjust the latch, remove the roll pin and swap washers from the inside of door to the outside of the door. Replace roll pin and inspect door fit. **SEE Figure 8.**

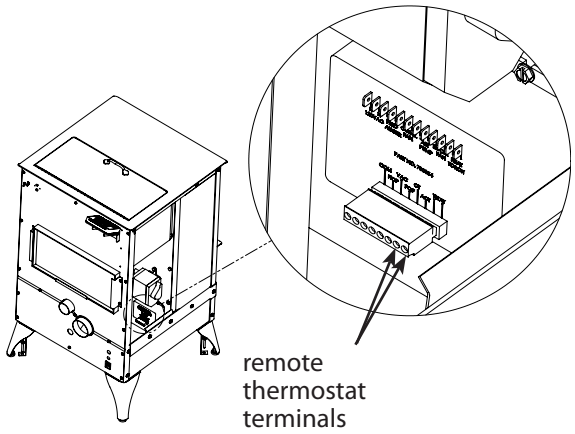


Figure 9: Remote Thermostat Terminals

SPECIFICATIONS

Model Number	MF3800
BTU/hour input (1)	45,000 max
Heating Capacity (2)	2,400 Sq. Ft.
Electrical Rating (3)	110 Volts, 15 Amp, 60 Hz
Power Consumption	Controller = 2.0 Watts Stove = 200 Watts (800 Watts total while igniting)
Fuel Storage Capacity	62 lbs.
Flue Size (4)	3 in.
Width	22 in.
Height	40 in.
Depth	22 in.
Weight	287 lbs.

(1) Heat output will vary depending on the brand, type and quality of fuel, and the moisture content. Consult your dealer for best results.

(2) Based on post-1982 home construction, requiring 35 BTU/Hr. per Sq. Ft.

(3) Install per NFPA 70 and follow all state and local codes, contact licensed electrical contractor for assistance.

(4) Install per NFPA 211 and follow all state and local codes, contact licensed installers for assistance.

Listing label:

Tested to the following standards: UL1482, ASTM E1509, ULC/ORD-C1482-M1990, and UCL S627-2000

GLASS SPECIFICATIONS

This stove is equipped with 5mm ceramic glass. Replace glass only with Cumberland Stove Works ceramic glass (PN 720002).

⚠ CAUTION

THIS INSTALLATION MUST CONFORM WITH LOCAL CODES. IN THE ABSENCE OF LOCAL CODES YOU MUST COMPLY WITH ASTM E1509, (UM) 84-HUD, ULC/ORD-C-1482, AND UCL S627-2000.

CUMBERLAND STOVE WORKS, MANUFACTURER OF THIS APPLIANCE, RESERVES THE RIGHT TO ALTER ITS PRODUCTS, THEIR SPECIFICATIONS AND/OR PRICE WITHOUT NOTICE.

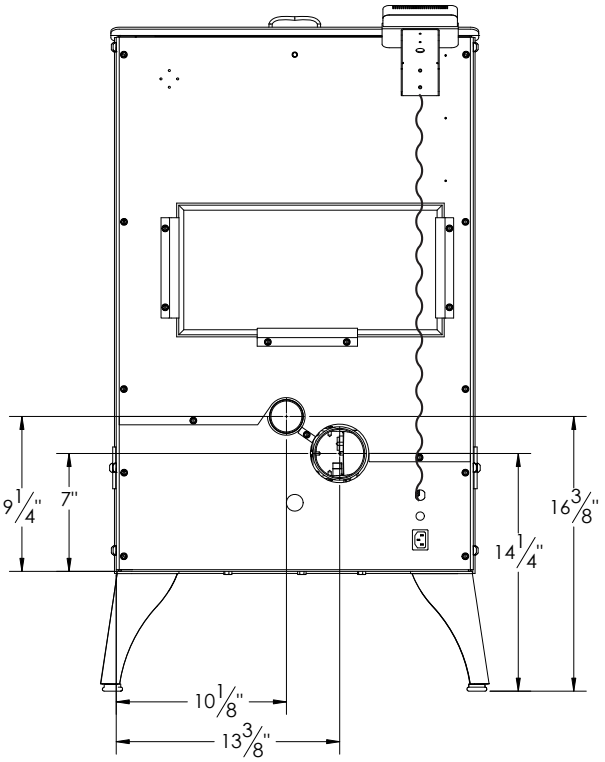


Figure 10: Intake and vent locations

INSTALLATION

It is recommended that the stove be installed and serviced by authorized professionals who are certified by the National Fireplace Institute (NFI) as NFI Pellet Specialists.

Proper installation of this stove is necessary for safe and efficient operation. Installing this product improperly may result in a house fire and personal injury. All applicable building codes for your location must be followed. In areas where building codes require additional steps to the installation of this product not included in this manual, the building codes have precedence and must be followed. Contact your local building inspector to obtain any necessary permits or inspection guidelines before installing the product.

STOVE PLACEMENT

Sketch out a plan for installing the stove including dimensions before permanent placement. When determining the location for the stove, wall stud location is critical. You may need to adjust the location of the stove to avoid trying to vent through a wall stud. Before placing the parlor stove, connect the vent and allow for minimum clearance to combustible walls.

FLOOR PROTECTION REQUIREMENTS

The stove must be installed on a noncombustible floor, with proper floor protection, or on a masonry hearth. The hearth or noncombustible floor protector must extend a minimum of six inches (6") in front, and four inches (4") from each side. When a cleanout t-vent is installed in the inside of a home, the floor protector must extend 2" beyond rear of t-vent. **SEE FIGURE 11.** When stove is vented straight through the wall and the cleanout t-vent is on the exterior of the home, the minimum clearance is 3" from the back of the stove to the edge of floor protector. This stove is certified for installation with or without legs. **SEE FIGURE 12.** The minimum floor protector material is 24 GA. sheet metal.

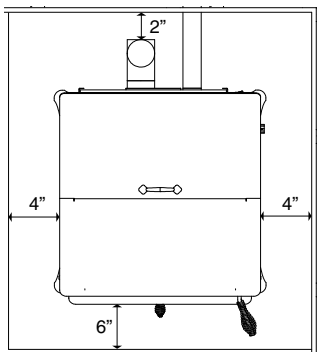


Figure 11

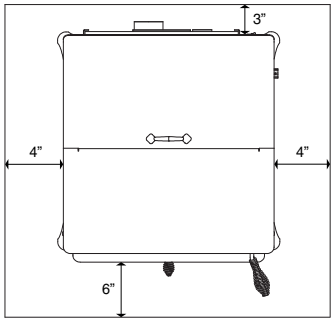


Figure 12

PARLOR STOVE FLOOR PAD CLEARANCES

⚠ WARNING

READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE THIS STOVE. FAILURE TO FOLLOW THE INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES AND SHOULD STAY AWAY TO AVOID BURNS TO SKIN AND/OR CLOTHING.

YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE STOVE.

CLOTHING AND OTHER FLAMMABLE MATERIALS SHOULD NOT BE PLACED ON OR NEAR THIS UNIT.

⚠ CAUTION

THIS STOVE SHOULD NOT BE USED AS THE ONLY SOURCE OF HEAT IN THE HOUSE. POWER OUTAGES AND PERIODIC MAINTENANCE WILL RESULT IN A TOTAL LOSS OF HEAT.

CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

CONTACT YOUR LOCAL AUTHORITY (SUCH AS MUNICIPAL BUILDING DEPARTMENT, FIRE DEPARTMENT, FIRE PREVENTION BUREAU, ETC.) TO DETERMINE THE NEED FOR A PERMIT.

KEEP COMBUSTIBLE MATERIALS (SUCH AS GRASS, LEAVES, ETC.) AT LEAST THREE (3) FEET AWAY FROM THE FLUE OUTLET ON THE OUTSIDE OF THE BUILDING.

INSTALLATION AND REPAIR OF THIS PARLOR STOVE SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE APPLIANCE SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A QUALIFIED SERVICE PERSON. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, FIRE BOX, AND CIRCULATING AIR PASSAGEWAYS OF THE STOVE BE KEPT CLEAN.

CLEARANCES TO COMBUSTIBLES

NOTE: These are minimum clearances to combustible walls established by the ASTM testing lab.

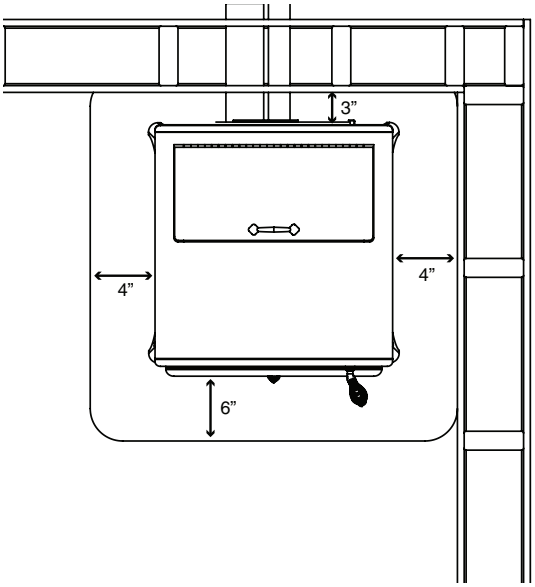


Figure 13
STRAIGHT INSTALLATION
THROUGH WALL

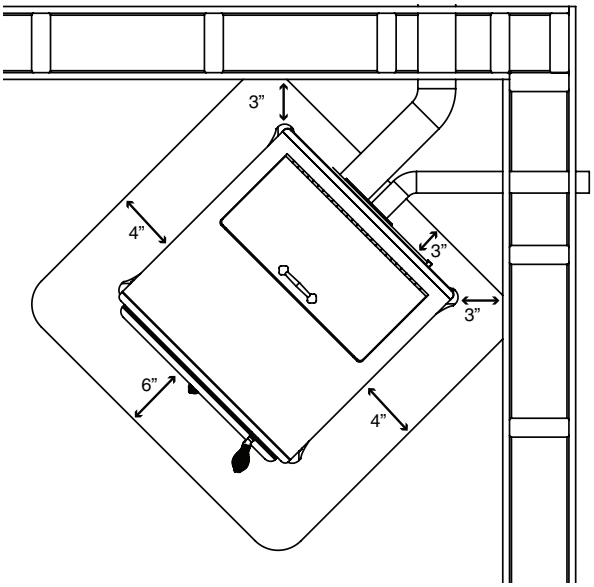


Figure 14
CORNER INSTALLATION
THROUGH THE WALL VENTS

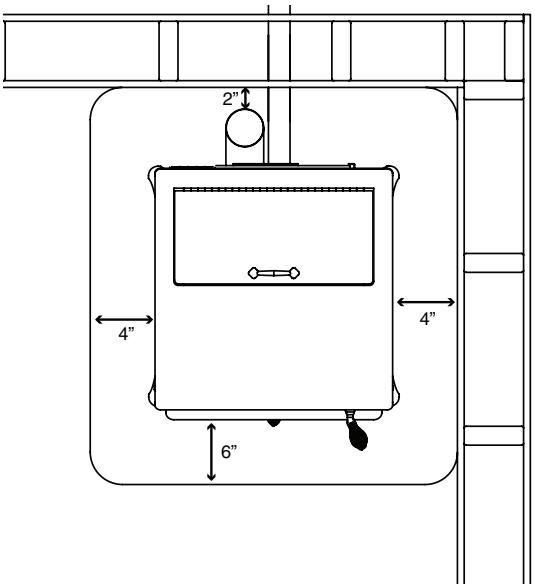


Figure 15
STRAIGHT INSTALLATION
INTERIOR VERTICAL VENTS

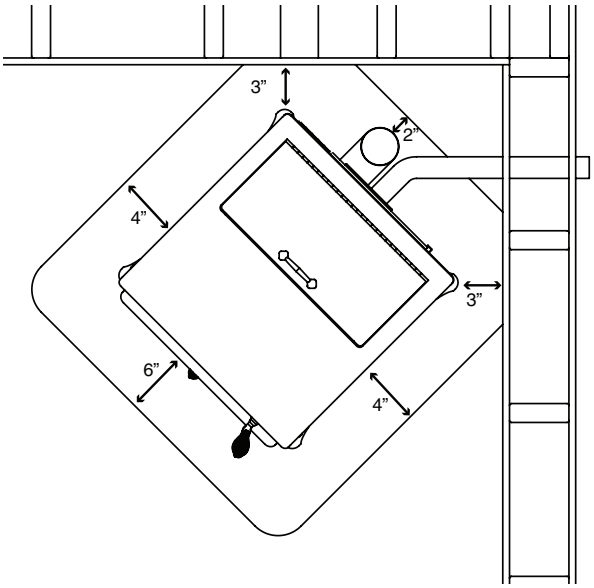


Figure 16
CORNER INSTALLATION
INTERIOR VERTICAL VENTS

NOTE: When interior vertical pellet vent is used for installation, the clearance to the back wall is determined by the vent size used. Install vent at clearance specified by the vent manufacturer. Take into consideration any upward-turning elbows or T's.

VENTING

Consult vent manufacturer's specifications and recommendations for all venting installations.

The following installation guidelines must be followed to ensure conformity with both the safety listing of this stove and to local building codes.

NOTE: Where passage through a wall, or a partition of combustible construction is desired, the installation shall conform to CAN/CSA-8365.

TYPE OF VENT

Pellet venting pipe (also known as L vent) is constructed of two layers with air space between the layers. This air space acts as an insulator and reduces the outside surface temperature of pipe.

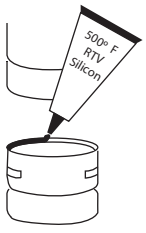
A UL-listed three- or four-inch (3" or 4") type L pellet vent exhaust system must be used for installation and attached to the pipe connector provided on the back of the stove. Use a 3" to 4" adapter for 4" pipe. A cap must be used at the termination of type L vent chimneys. At elevations greater than 2,500 feet above sea level, a four-inch (4") L is required.

PELLET VENT INSTALLATION

Vent termination **MUST** exhaust above air inlet elevation.

It is recommended to install at least three feet (3') of vertical pellet vent pipe. This will create a natural draft to prevent the possibility of smoke or odor during appliance shutdown and will keep exhaust from causing a nuisance or hazard from exposure to high temperatures.

The installation must include a cleanout tee to enable collection of fly ash and to permit periodic cleaning of the exhaust system.



All joints for pellet vent are required to be fastened with at least three screws. Pellet vent section connections (including adapters, elbows, etc.) should be sealed airtight by injecting 500° F. RTV silicone into the gap between sections. The area where the vent pipe goes through to the exterior of the home must be sealed with silicone or other means to maintain the vapor barrier between the exterior and the interior of the home.

⚠ WARNING

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

DO NOT CONNECT DIRECTLY TO A MASONRY CHIMNEY.

DO NOT TERMINATE VENT IN ANY ENCLOSED OR SEMI-ENCLOSED AREA, SUCH AS: CARPORTS, GARAGE, ATTIC, CRAWL SPACE, UNDER A SUN DECK OR PORCH, NARROW WALKWAY OR CLOSED AREA, OR ANY LOCATION THAT CAN BUILD UP A CONCENTRATION OF FUMES SUCH AS A STAIRWELL, COVERED BREEZEWAY, ETC.

⚠ CAUTION

VENT SURFACES CAN GET HOT ENOUGH TO CAUSE BURNS IF TOUCHED. NONCOMBUSTIBLE SHIELDING OR GUARDS MAY BE REQUIRED.

INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.

Preferred Pellet Vent Termination

- The stove vent must terminate on the outside of the building. Horizontal terminations must extend a minimum of 12" from the wall. Vertical terminations must protrude a minimum 24" from the roof surface. **In addition, all clearances listed below must be met. SEE FIGURE 17**
- Must have an approved cap (to prevent water from entering) or a 45° downturn with rodent screen.
- If the termination is located on a windy side of the house, we suggest using an approved house shield to prevent soot from building up on the side of the house.
- A vent must not be located where it will become plugged by snow or other material.

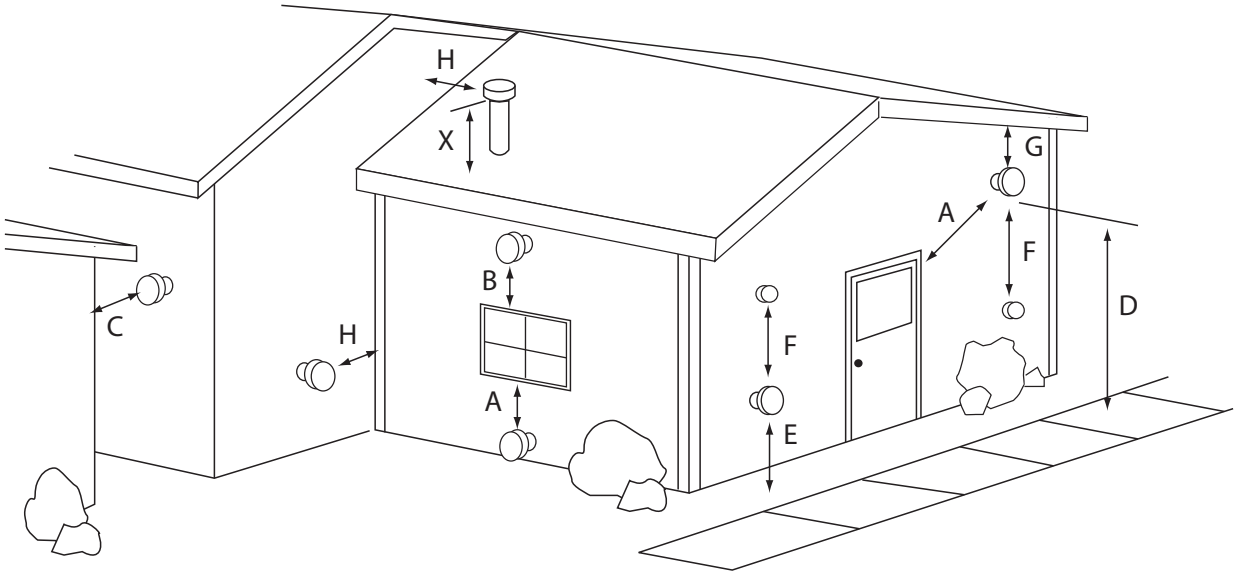


Figure 17: Vent Termination

A: A Minimum 4' clearance below or beside any door or window that opens. (This clearance may be reduced to 18" if using outside air). We recommend the door or window be kept closed during operation. Minimum 1' clearance below or beside any window that does not open.
B: Minimum 1' clearance above any door or window that opens.
C: Minimum 2' clearance from any adjacent building.
D: Minimum 7' clearance above any grade when adjacent to public walkways.
NOTE: Vent may not terminate in covered walkway or breezeway.
E: Minimum 2' clearance above any grass, plants, or other combustible materials.
F: Minimum 3' clearance from any forced air intake of any other appliance.
G: Minimum 2' clearance below eaves or overhangs.
H: Minimum 1' clearance horizontally from combustible wall.
X: Must be a minimum of 2' above the roof.

Venting the Pellet Stove:

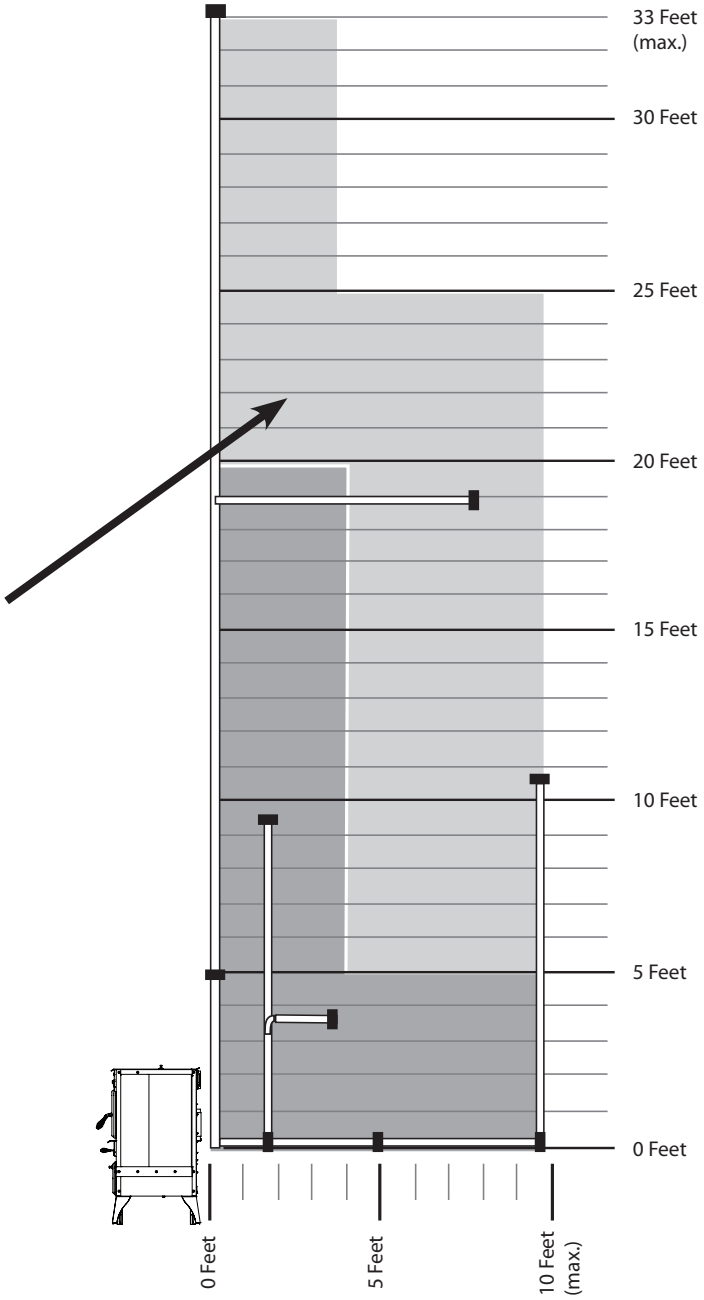
- **Do not install flue damper in the exhaust venting system of this unit.**
- **Use an approved wall thimble when passing the vent through walls. Use a ceiling support/fire stop spacer when passing the vent through ceilings (make sure to maintain clearance to any combustibles.)**
- **if using more than one tee and 180° of elbows, you must use 4" venting pipes.**

NOTE: To achieve optimum performance, it is recommended that yo keep the vent as short as possible, especially in regard to the horizontal run.

The vent must have a support bracket every 5' of pellet vent when on the exterior of the structure.

The vent height and run must not exceed the distance as illustrated in the diagram below.

Venting into this (the lighter) shaded area may require combustion motor off-set adjustments. See "Fan Options" on page 24 for more information.



OUTSIDE AIR CONNECTION

Connection from the intake pipe (2" diameter pipe in rear of stove) to the outside of the house is REQUIRED for mobile home installation. It is *recommended* in tightly sealed homes with exhaust fans such as kitchen or bathroom fans. This will eliminate poor performance due to negative pressure.

Only noncombustible pipes two inches (2") or greater in diameter are approved to use for outside air connections (straight or flexible). **PVC pipe is NOT approved and should NEVER be connected to the stove. HINT: A Cumberland Stove Works air inlet will accept automotive exhaust pipes and couplers.**

If the air inlet is connected to the outside, it MUST be terminated with a vertical 90º bend (down) or with a wind hood. Failure to do so could result in a burn back during high winds blowing directly up the air inlet during a simultaneous power failure.

Blockage, excessive length, or extra bends in the air intake pipe will starve the stove of combustion air. A 90º bend is equivalent in restriction to approximately 30" of straight inlet pipe.

MOBILE HOME

Installation in a mobile home should be in accordance with the manufactured home and safety standard. Department of Housing and Urban Development (HUD) CITE: 24CFR3280.707 stating this stove must be vented to the outside. In addition to the standard installation instructions, the following requirements are mandatory for installation in a mobile home:

1. Stove must be bolted to the floor. Stove will have four tie-down straps that bolt to the feet and the floor. **SEE FIGURE 18.**
2. Stove must have an outside air source.
3. Stove must be electrically grounded to the steel chassis of the mobile home.
4. All vertical chimney vents must have wall supports.
5. All exhaust systems must have a spark arrestor.

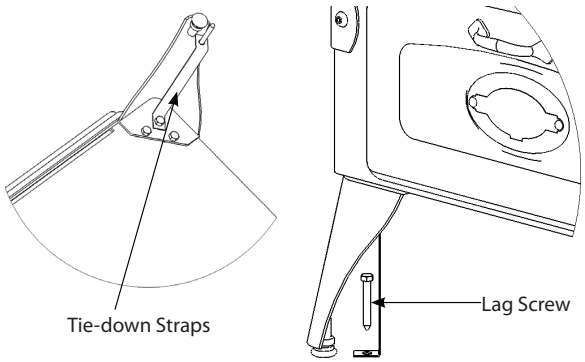


Figure 18: Mobile Home Anchor & Leg Assembly

⚠ WARNING

DO NOT INSTALL IN A SLEEPING ROOM.

⚠ CAUTION

CUMBERLAND STOVE WORKS RECOMMENDS USING OUTSIDE AIR FOR COMBUSTIBLE AIR CONNECTIONS, AS THE OPERATION OF EXHAUST FANS SUCH AS BATHROOM FANS, ATTIC FANS, ETC., MIGHT STARVE THE PARLOR STOVE OF COMBUSTIBLE AIR. STARVING THE STOVE OF AIR CAN CREATE A NEGATIVE PRESSURE IN THE ROOM. PROVIDE ADEQUATE VENTILATION IN THE ROOM ACCOMPANYING THE PARLOR STOVE. IF NOT, THE PRESSURE SWITCH MAY SHUT OFF OPERATION OF THE PARLOR STOVE.

THE STRUCTURAL INTEGRITY OF THE MANUFACTURED HOME FLOOR, WALL, AND CEILING/ROOF MUST BE MAINTAINED.

SIMPLE STOVE VENTILATION EXAMPLES

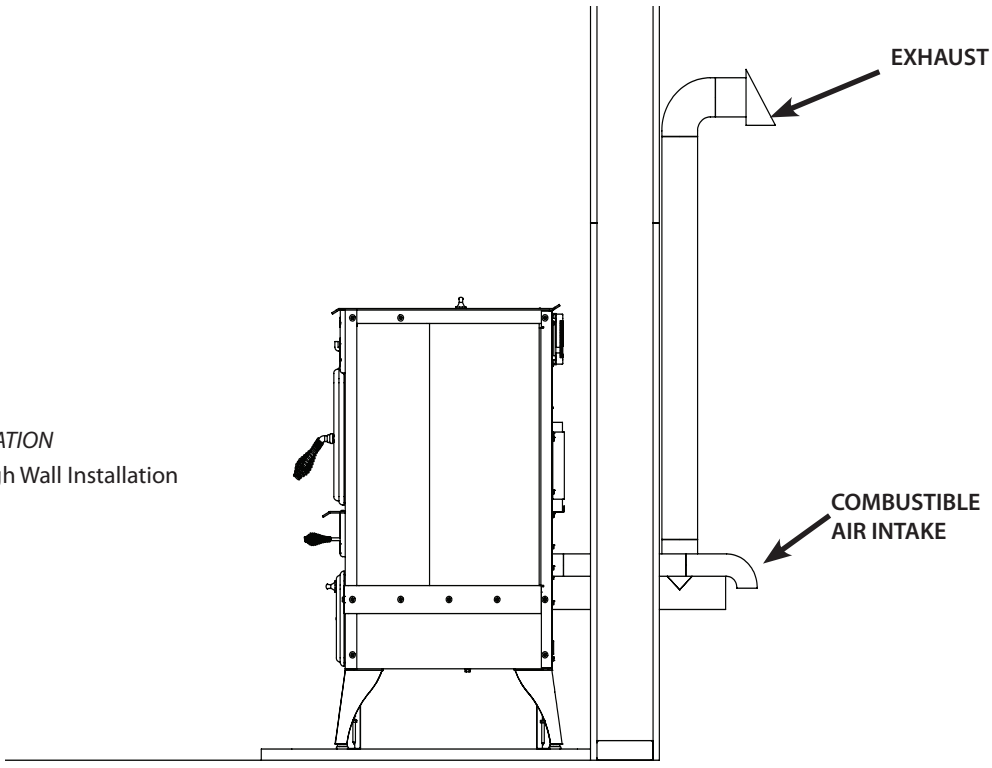


Figure 19: STRAIGHT INSTALLATION
Outside Vertical Rise, Through Wall Installation

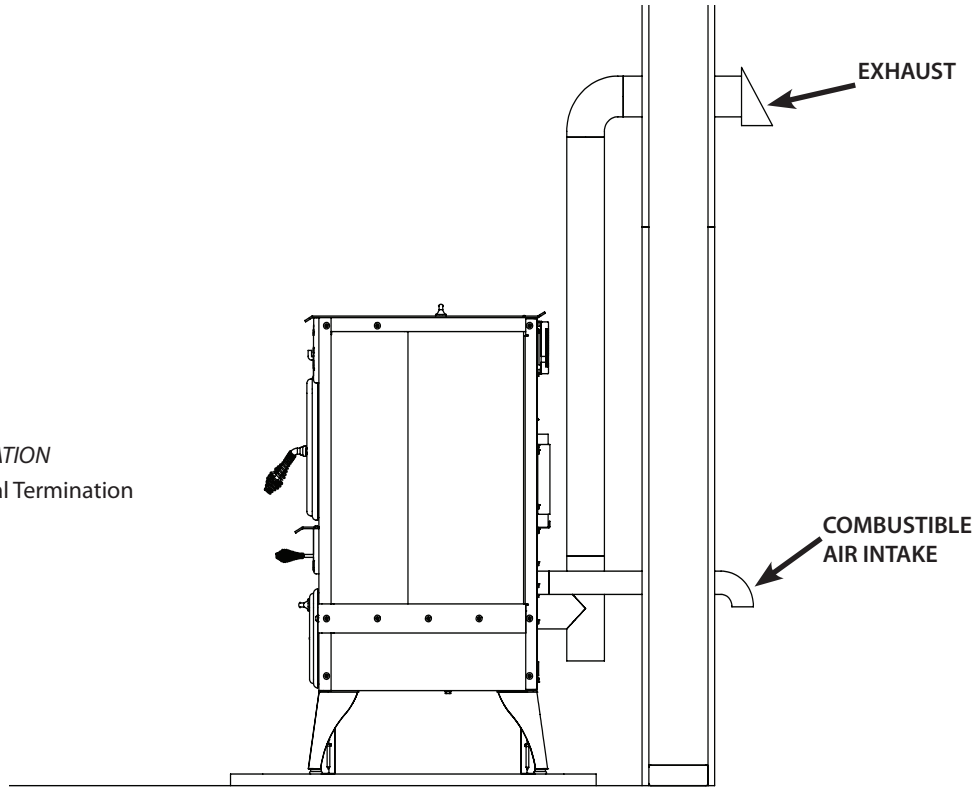
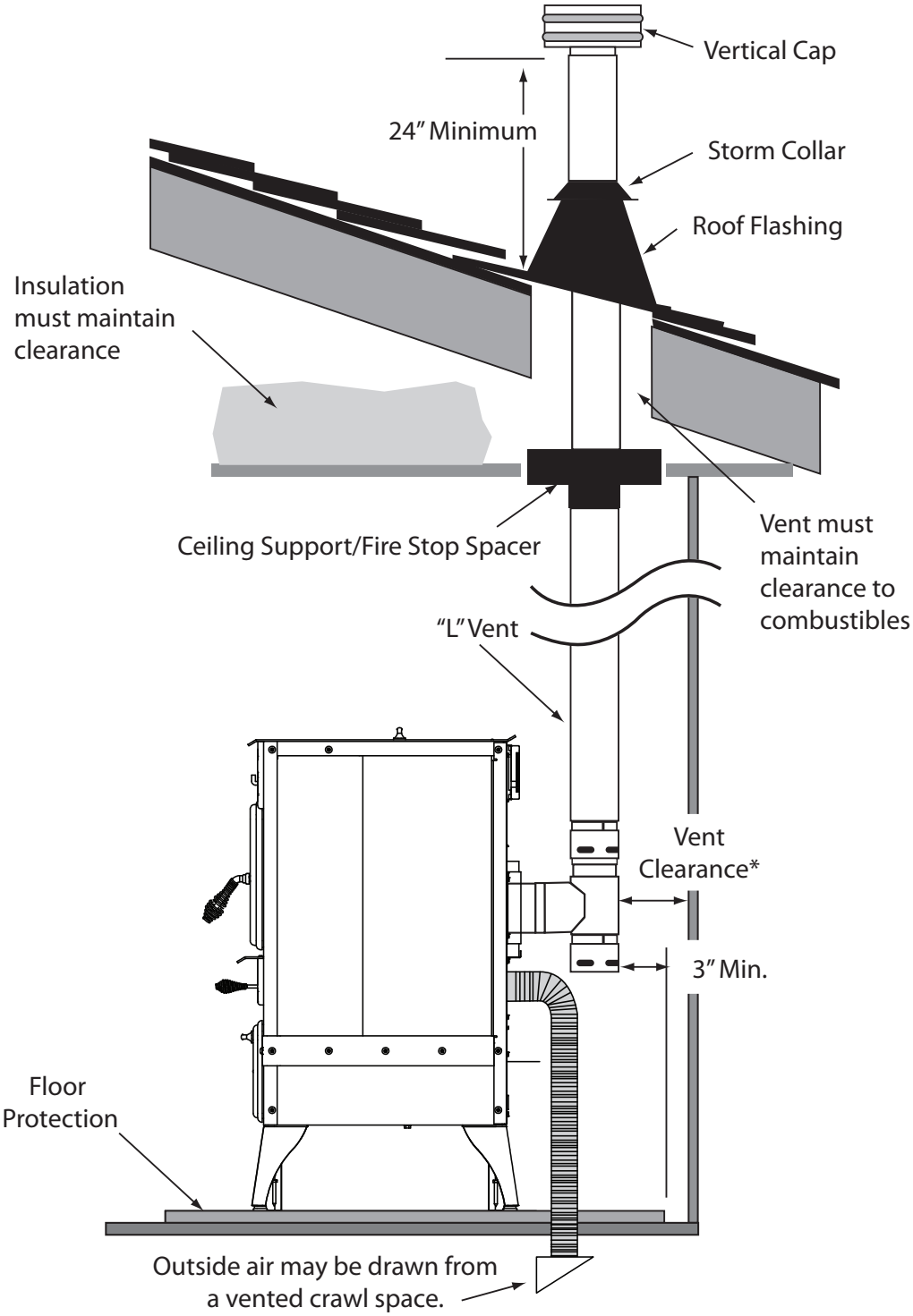


Figure 20: STRAIGHT INSTALLATION
Inside Vertical Rise, Horizontal Termination

COMPLEX STOVE VENTILATION EXAMPLES

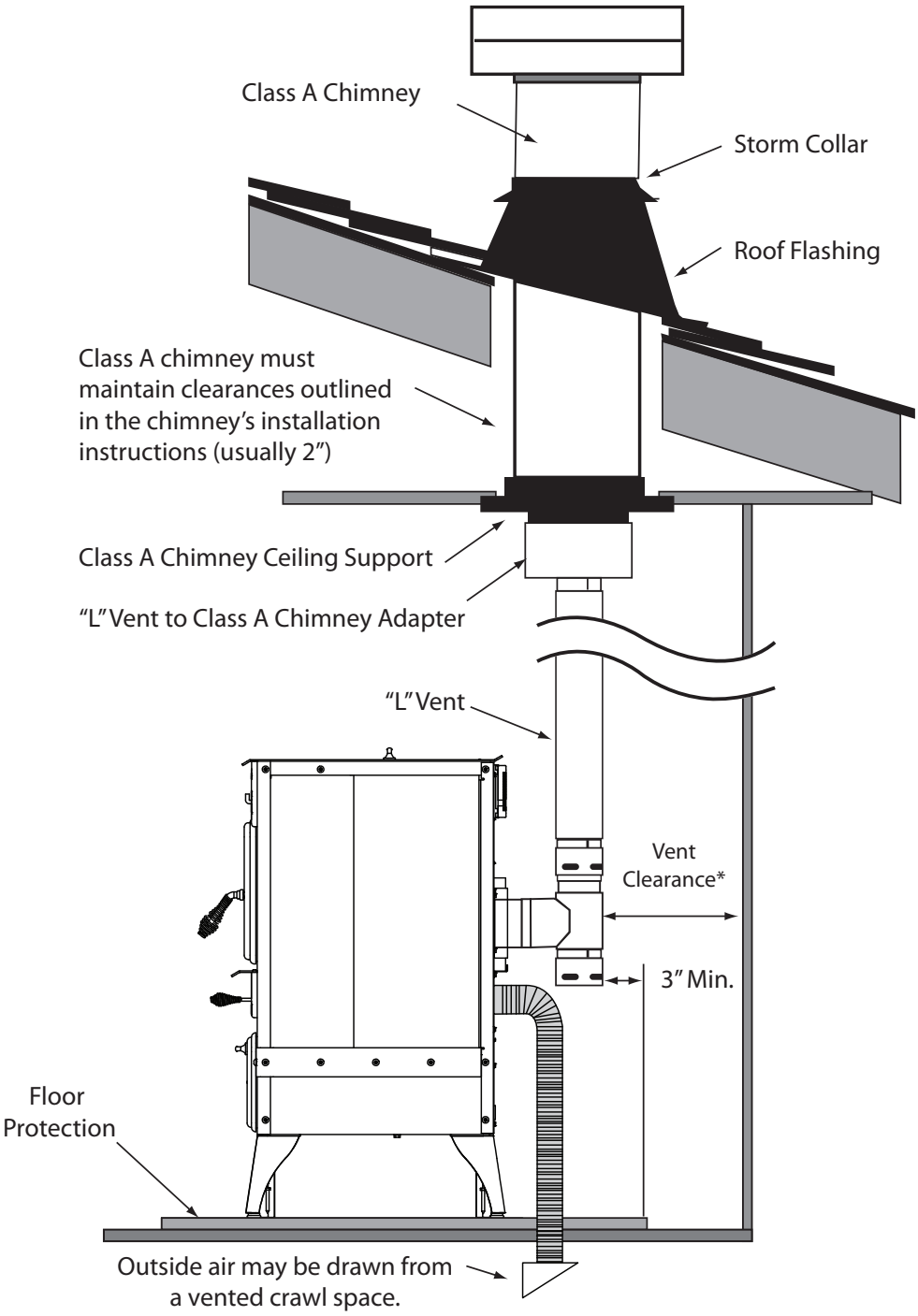
Interior Vertical Installation



* Install a vent at clearance specified by the vent manufacturer

STOVE VENTILATION EXAMPLES

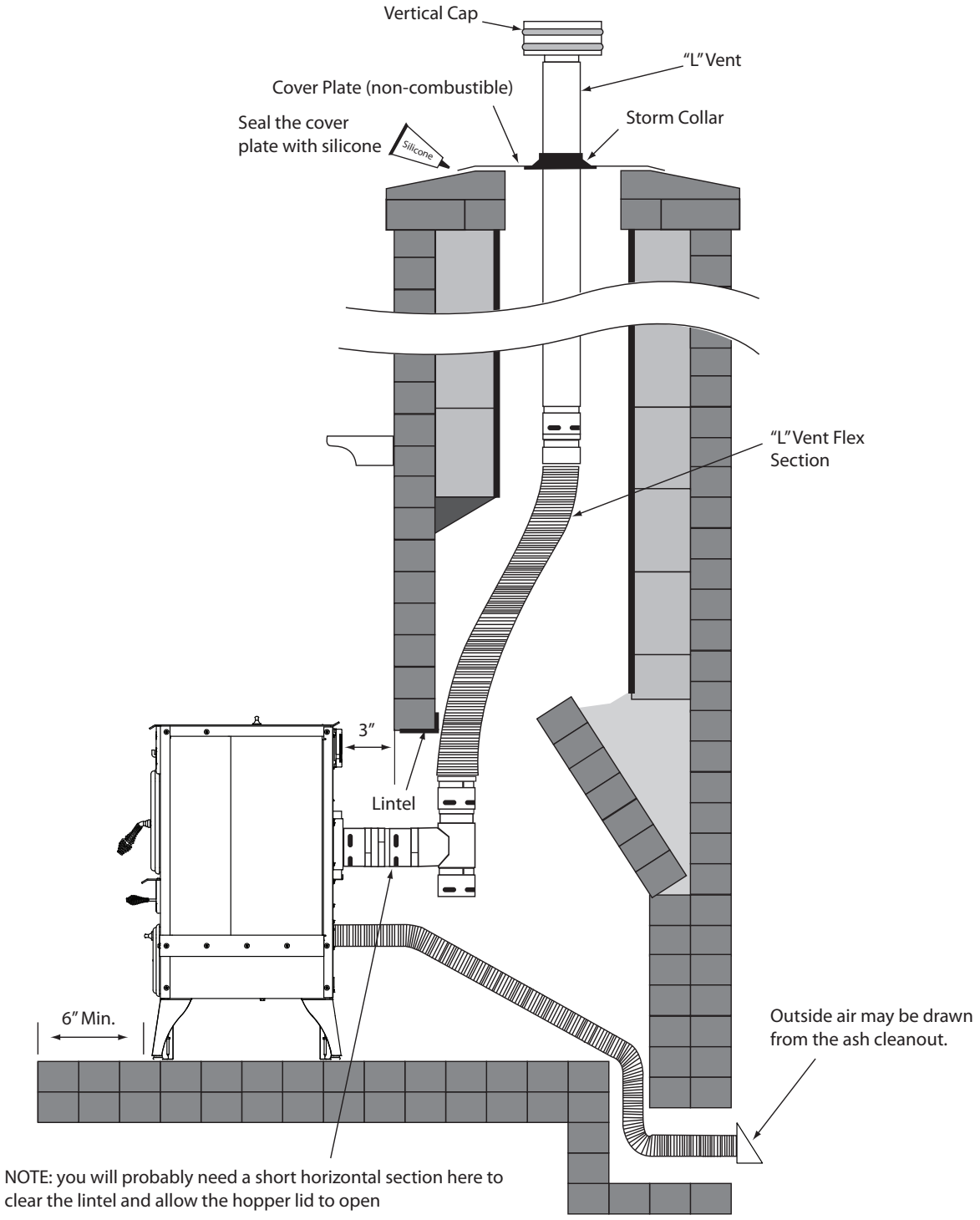
Class A Chimney Retrofit


Class A Chimney
Storm Collar
Roof Flashing
Class A chimney must maintain clearances outlined in the chimney's installation instructions (usually 2")
Class A Chimney Ceiling Support
"L" Vent to Class A Chimney Adapter
"L" Vent
Vent Clearance*
3" Min.
Floor Protection
Outside air may be drawn from a vented crawl space.

* Install a vent at clearance specified by the vent manufacturer

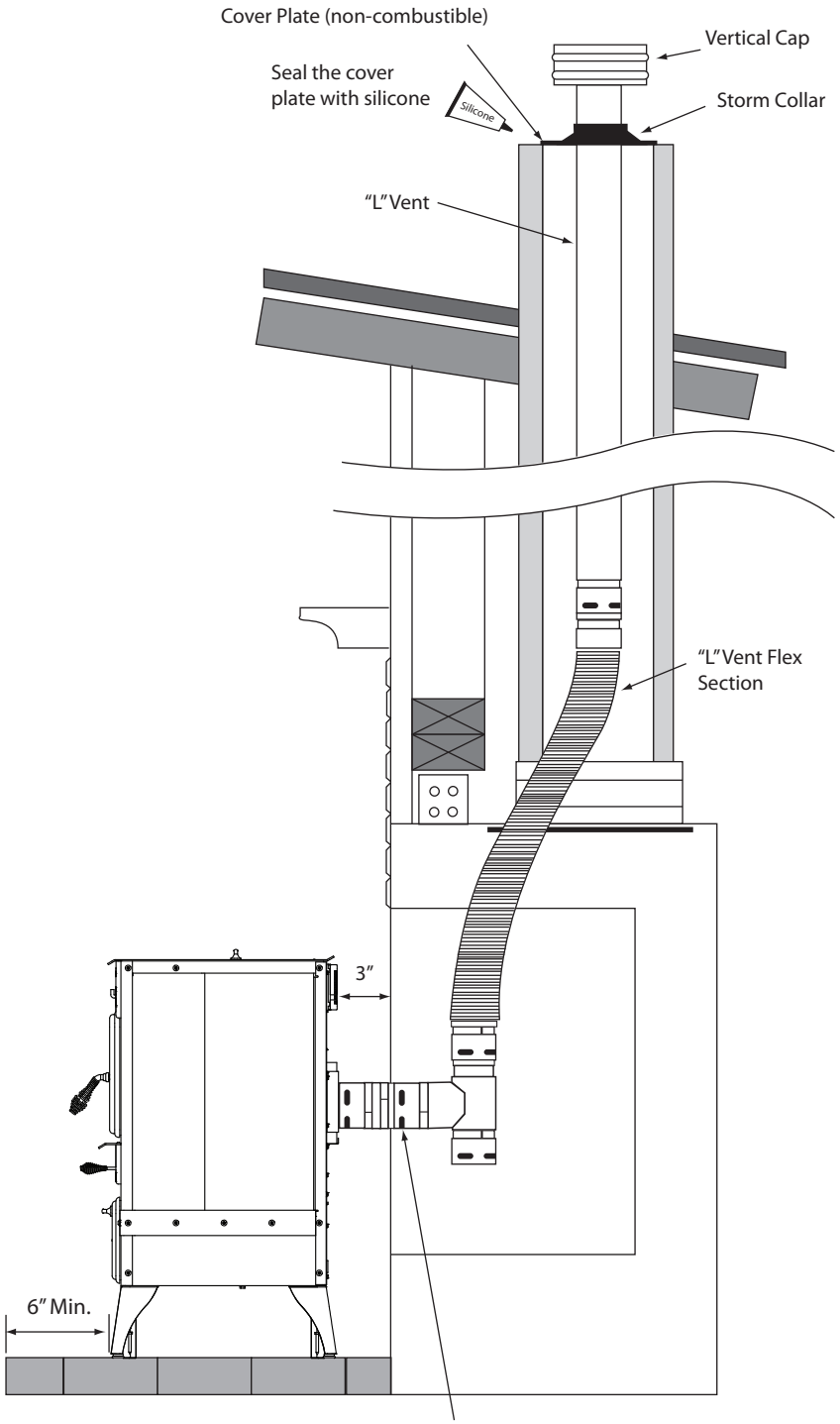
STOVE VENTILATION EXAMPLES

Masonry Fireplace Hearth Stove


Vertical Cap
"L" Vent
Cover Plate (non-combustible)
Seal the cover plate with silicone
Silicone
Storm Collar
"L" Vent Flex Section
3"
Lintel
6" Min.
Outside air may be drawn from the ash cleanout.
NOTE: you will probably need a short horizontal section here to clear the lintel and allow the hopper lid to open

STOVE VENTILATION EXAMPLES

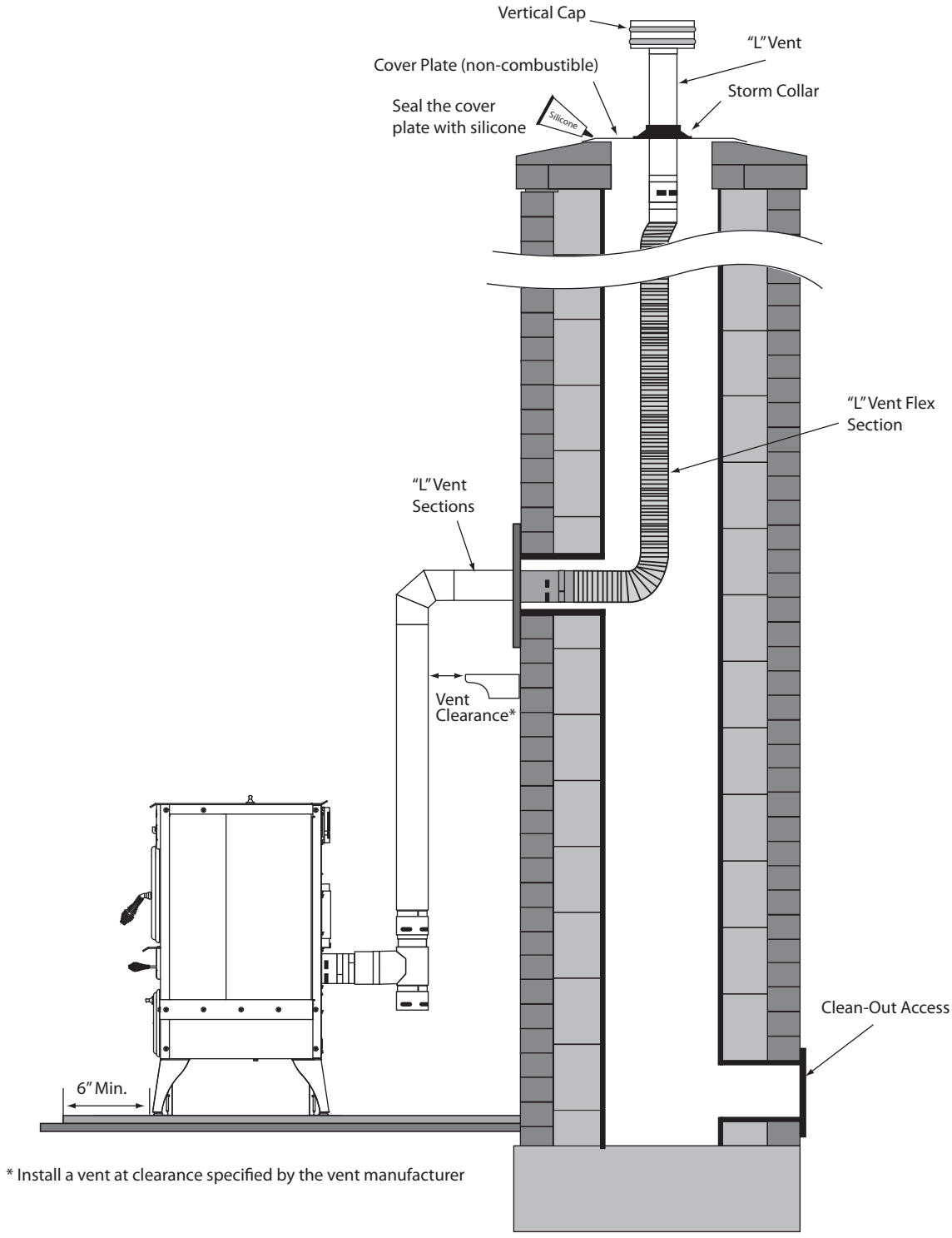
Zero-Clearance (Metal) Fireplace Hearth Stove



NOTE: you will probably need a short horizontal section here to clear the lintel and allow the hopper lid to open.

STOVE VENTILATION EXAMPLES

Freestanding Masonry Chimney



* Install a vent at clearance specified by the vent manufacturer

Servicing Tools, Equipment and Parts

Tools/Equipment Needed During Service Calls:

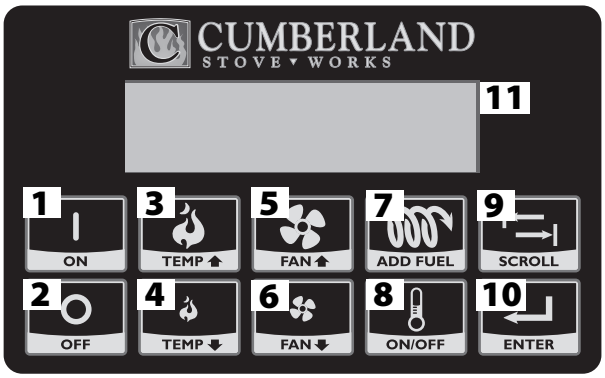
-5/16" Combination Wrench
-5/16", 3/8", ¼", 11/32" Sockets with Ratchets & Extensions
-Flat Blade Screwdriver
-#2 Phillips Screwdriver
-T30 Torx Bit, T20 Torx Bit
-Pliers
-Small Side Cutter
-Wire Crimping Tool
-¼" Female Spade Terminal (Insulated)
-Mini-Blade Screwdriver
-5/32" Allen Wrench
-High Temp Silicone

Parts Needed During Service Calls:

-IM Box (P/N 730054)
-Display (P/N 730053)
-Fire Pot (P/N 710110)
-Fire Plate (P/N 710098)
-Auger Motor (P/N 720079)
-Igniter for MF3800 only (P/N 720032)
-Air Pump (P/N 720072)
-Vacuum Switch (P/N 720073)
-Combustion Blower (P/N 720078)
-Over Limit Switch (P/N 720100)
-Proof of Fire Switch (P/N 720015)
-Limit Switch (P/N 720085)
-Hopper Switch (P/N 720055)

Safety Devices:

-High Limit Switch (P/N 720085)
-Proof of Fire Switch (P/N 720015)
-Vacuum Switch (P/N 720073)
-Auger Over Temp Switch (P/N 720100)
-Fuel Shut-Off Gate (P/N 710140 Kit)



Explaining the Tri-X Controller Key Pad

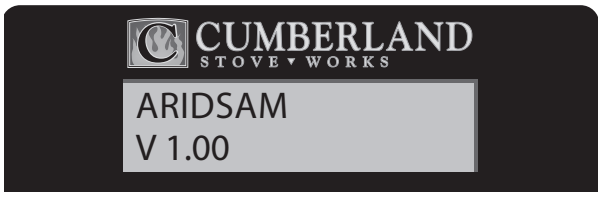
1: **On Switch** – Starts Stove Operation When Instructed.
2: **Off Switch** – Turns Off Stove Operation at Anytime
3: **Temperature Up Control** – Controls heat levels 1 - 6
4: **Temperature Down Control** - Controls heat levels 1 - 6
5: **Fan Up Control** – Makes room fan go faster
6: **Fan Down Control** – Makes room fan go slower
7: **Add Fuel Control** – Turns Auger on for 1 minute
8: **Thermostat On / Off** – Turns On / Off Thermostat Options
9: **Scroll** – Changes Heat Ranges / Reignition
10: **Enter** – Chooses the Top Selection on the Screen
11: **Display Screen**

CONTROLLER SETTINGS AND DIAGNOSTICS

MF3800 Test Mode

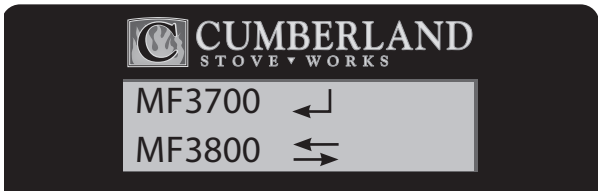
The controller "TEST MODE" is configured to run all of the outputs (combustion fan, convection fan, igniter, air pump, and auger motor) simultaneously at full power. During the test mode, the auger will stop if the hopper door is opened, and the "VACUUM FAULT CHECK SEALS" message will be displayed if door or ash pan is open. The test mode is designed to test that all of the outputs are working and the wiring harness connections are correct. It is also designed to verify that the vacuum switch and the hopper switch are functioning properly.

To activate the test mode, unplug the stove, wait 5 seconds, and plug the stove back in. The display will first read "Ardisam v1.00".

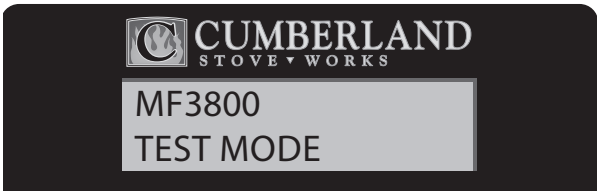


After three seconds, the screen will read "MF 3700 / 3800" above, and "Ver 1-0-**" below (** denotes the version of the software). When the screen reads "MF3700 / 3800 VER 1-0-**, (one above the other) hold down the SCROLL key.

After three seconds, the screen will then read "<--| MF3700, MF3800 (IGN)" (One above the other). Pressing the ENTER key will activate the program that ignores all of the electric ignite screens and sequences as the ENTER key activates the controller to operate a model MF3700 (no igniter).



Pressing SCROLL will activate the MF3800 Test Mode. At this point, the screen will read "MF3800 TEST MODE".

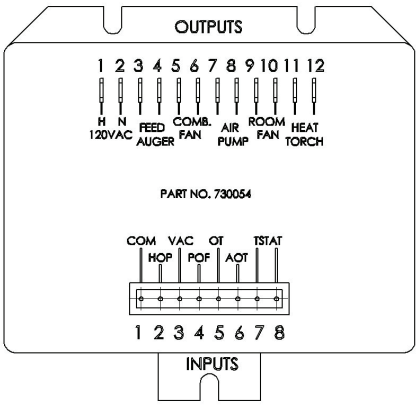


In either case, all of the outputs on the controller will be on full power at 110 to 120 Volts AC. Now all of the motors can be checked for rotation and function, and the igniter and air pump can be checked for heat production and air output. If the auger does not run during the test mode, make sure that the hopper switch is depressed. If the hopper switch is depressed but the auger motor still does not turn, disconnect the hopper switch and plug the wiring harness ends into each other. If plugging the wiring harness ends into each other turn the auger on, the hopper switch is defective. Replace the switch. **DO NOT LEAVE THE HARNESS BYPASSED.**

USE EXTREME CAUTION WHEN METERING THE OUTPUTS ON THE CONTROLLER. THE VOLTAGE IS 120V, AND, IF ONE LEG OF THE METER TOUCHES TWO OUTPUT TABS AT THE SAME TIME, THE BOARD WILL NEED TO BE REPLACED.

Always meter the OUTPUTS (1/4" tab terminals) in pairs as labeled on the controller. Power wires are on the left, common wires are on the right. The rest of the outputs (everything except the auger motor) do not need input terminal bypassed to supply 120V AC to the output DURING THE TEST MODE. **SEE FIGURE 19.**

Figure 19



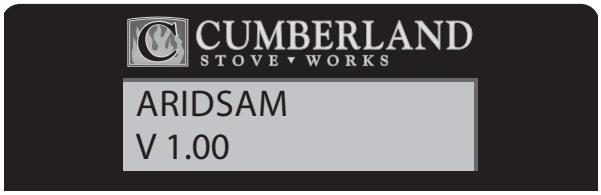
If the auger motor still doesn't turn, check the voltage of the auger motor leads and the voltage of the auger motor terminals on the controller. Both should read 110V to 120V AC. If there is voltage to the auger motor but it doesn't turn, the auger is either plugged, or the motor is defective. If there is no voltage to the harness, put a jumper wire between INPUT pins 1 and 2 on the input connector and meter between OUTPUT tabs 3 and 4 on the control board. If there is no voltage present, replace the control board (Interface Module – Part Number 730054). This same procedure can be used for the combustion blower, convection blower, air pump, and heat torch.

NOTE: When you have completed your work in the TEST MODE, the only way to exit the TEST MODE sequence is to unplug the stove. You will then need to go through the start-up process again, reigniting the stove and selecting the appropriate fuel range.

FAN OPTIONS:

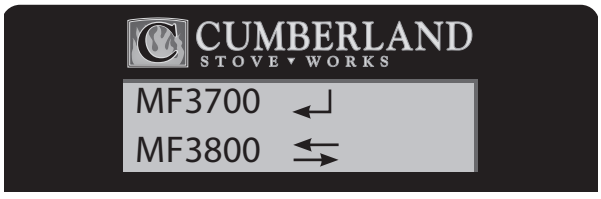
The voltage to the combustion and convection fans can be offset. The combustion fan offset at the factory is set to 3 or 4. This setting is selected at the factory because it generates a vacuum within the stove at a range of 0.10 to 0.25 W.C. after 10 minutes during the STARTING FIRE sequence. If the stove does not burn correctly, make sure that the sealing surfaces of the firepot are secure and the vacuum within the firebox is within this specified range during the STARTING FIRE screen. DO NOT CHECK THE VACUUM DURING THE TEST MODE. If the vacuum during the STARTING FIRE screen is less than 0.10 or more than 0.25, the combustion fan voltage offset should be changed.

To get to FAN OPTIONS, the stove must be unplugged first. Wait 5 seconds and plug the stove back in. The display will first read "Ardisam v1.00".



After 3 seconds, the screen will read "MF3700 / 3800 Ver 1-0-**" (** denotes the version of software). When the screen reads this way, hold down the SCROLL key.

After 3 seconds, the screen will read "<--| MF3700, MF3800 (IGN)" (One above the other). Remove your finger from the SCROLL button, then hold down the ON and OFF buttons at the same time.



After three seconds, the screen will read "FAN OPTIONS". Then, after 5 more seconds, the screen will read "FAN OPTIONS SAVE". Every 5 seconds the fan option selected is saved to memory. The combustion fan voltage offset (CB) can be changed by pushing the FAN UP key. The convection fan voltage (CV) can be changed by pushing the FAN DOWN key.

Scroll through the offsets until the correct setting is reached for the installation at hand. Wait until the screen reads "CB OFFSET*", "CV OFFSET* SAVED". When the screen reads "SAVED", unplug the stove and test the vacuum again during the STARTING FIRE screen after 10 minutes.

The vacuum in the firebox should be 0.10 to 0.25 W.C. during the STARTING FIRE phase. Variables that contribute to changing fan offsets include voltage drop in the cord supplying power to the stove, low voltage supply from utility, venting configurations that either limit flow or supply too much natural draft, and extreme cold temperatures that hinder motor RPM.

NOTE: The CV OFFSET is set at 0 and should be turned up as high as 9 to move more room air.

The fan options and voltage offsets are not intended to compensate for a poorly maintained or dirty stove. For this reason, the voltage offset is not in the this manual. The voltage offset can only be performed on a clean stove with clean venting, a clean blower, clean exhaust manifold, clean firepot, clean fireplate and a clean potholder.

NOTE: When you have completed your work in the FAN OPTIONS, the only way to exit the FAN OPTIONS sequence is to unplug the stove. You will then need to go through the start-up process again, reigniting the stove and selecting the appropriate fuel range.

FUEL SHUTOFF OPERATION

Checking the Fuel Shutoff Gate

Once the stove has been properly installed and plugged into a grounded surge protector, you are nearly ready to begin operation. Prior to the first use, however, it is necessary to ensure the fuel shutoff gate is open.

Your Cumberland Stove is equipped with a fuel gate in the hopper, which prevents fuel from entering into the auger. This feature provides two important attributes to your stove:

1. If your auger mechanism requires service, the gate can be closed to allow its removal without emptying the hopper of fuel.

2. In an over-temp situation, the fuel gate will automatically close and the auger will evacuate any material in the auger housing.

Cumberland Stoves are shipped with the fuel gates open, which ensures fuel enters the auger. However, during shipping the fuel gate is susceptible to closing and may need to be opened. You can determine if the fuel gate is closed by opening the hopper. If the auger is visible at the bottom of the hopper, the gate is open and you can proceed with the initial operation.

If the auger is not visible, you will need to open the fuel shutoff gate by performing the following instructions. If you wish to service the auger, these procedures also allow you to close the fuel shutoff gate.

INSTRUCTIONS FOR OPERATING FUEL SHUTOFF GATE

1. To access the fuel shutoff gate, remove the right side panel by first removing the air filter in the back of the stove.

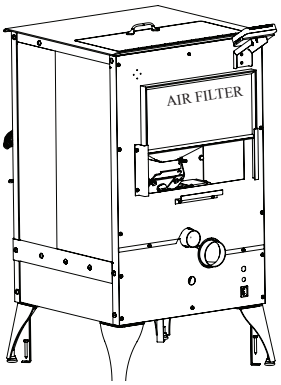


Figure 20: Air filter

Figure 21: Removing panels

By placing your hands on both sides of the right side panel, lift straight up and then tilt the bottom of the panel away from the stove. Lower the panel slowly when the bottom clears the stove. Set panel aside for reinstallation.

⚠ WARNING

NEVER RESET FUEL GATE BY REACHING THROUGH THE AIR CLEANER OPENING. THIS WILL DAMAGE THE CABLE AND HINDER GATE OPERATION.

2. To open/reset the fuel shutoff gate, pull the looped steel cable out away from the stove, while pushing up simultaneously on the trigger. You will hear the gate click when it's locked in the open position. **(SEE FIGURE 22)**

Figure 22: Reset fuel shutoff

3. To close the fuel shutoff gate manually for service, (i.e. in the event of a pellet jam) press down on trigger mechanism. **(SEE FIGURE 23)**

   (Gate will close automatically in over-temp situations.)

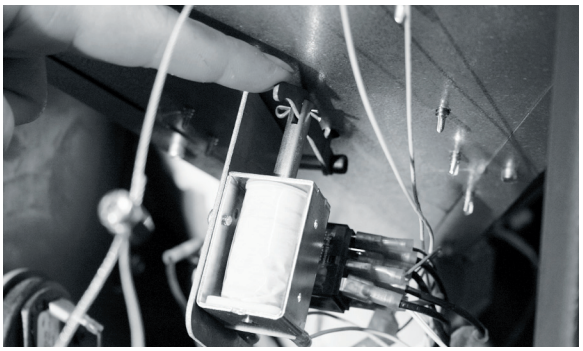
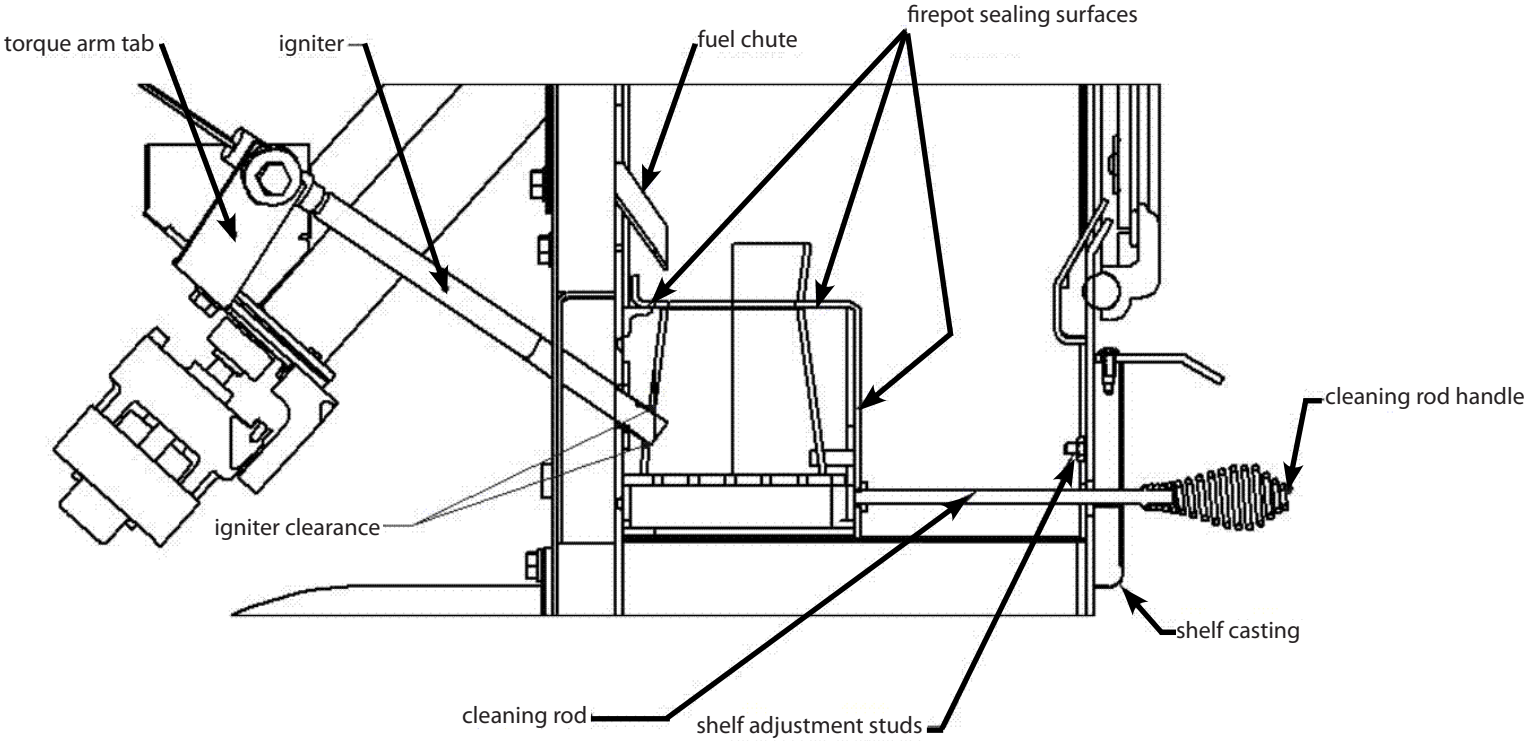


Figure 23: Close fuel shutoff gate

4. Reinstall right side panel and air filter. You can now proceed with operating the stove.

FIREPOT AND FIREBOX SEALING SURFACES



The firepot has 3 sealing surfaces that must be secure for the stove to function properly. The sealing surfaces are located at the front, top, and rear of the firepot.

Misalignment WILL cause a lazy flame, bridging, pot overloading, and possibly burning back up the feed chute.

NORMAL CARE & MAINTENANCE

Cleaning the Glass

Only clean glass when the glass is cool. Wipe the glass clean with a dry or damp rag. If this does not clean the glass, use any non-abrasive cleaner.

Removal of Broken Ceramic Glass

Open the door and lift it from the hinges. Lay the door down on newspaper with glass clips facing you. Loosen the screws and take off the glass clips. Remove the broken glass carefully and discard.

Reverse the above procedure for replacing new glass with new gasket.

Firepot Remains

Every time the hopper is filled with fuel the firepot should be emptied. To empty the firepot pull up then out on the firepot cleaning rod. **NOTE: THE FIREPOT MUST BE PUSHED ALL THE WAY BACK AND SEATED AGAINST THE POT HOLDER FOR THE STOVE TO FUNCTION CORRECTLY. FAILURE TO DO SO WILL CAUSE POT OVERLOAD.**

Soot and Fly Ash

The products of combustion will contain small particles of fly ash. The fly ash and soot will collect in the exhaust venting system and restrict the flow of flue gasses. The exhaust venting system should be inspected at least once per month to determine if cleaning is necessary. If cleaning is necessary, disassemble the exhaust vent and clean the individual parts. When cleaning ash, use an approved ash vacuum. See a dealer for more details.

Disposal of Ashes

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal.

Daily Maintenance

The surfaces on the stove may be hot. Always wear protective gloves even when the stove is cool to the touch.

- Empty firepot into ash pan by sliding the firepot cleaning rod in and out several times. Empty the firepot with every hopper of fuel burned or as often as required, depending on the quality of the fuel.
- Unscrew the cleaning rod from the firepot to free firepot for removal.

⚠ CAUTION

DO NOT OPERATE STOVE WITH BROKEN GLASS.

DO NOT SLAM THE DOOR SHUT.

DO NOT STRIKE GLASS.

DO NOT USE ABRASIVE CLEANERS.

DO NOT CLEAN HOT GLASS.

REPLACE CERAMIC GLASS WITH FACTORY- AUTHORIZED REPLACEMENT PARTS ONLY.

THE CLINKER WILL REMAIN HOT FOR SEVERAL MINUTES AFTER IT IS PULLED OUT OF THE FIREPOT.

USE AN APPROVED ASH VACUUM WHEN CLEANING ASHES

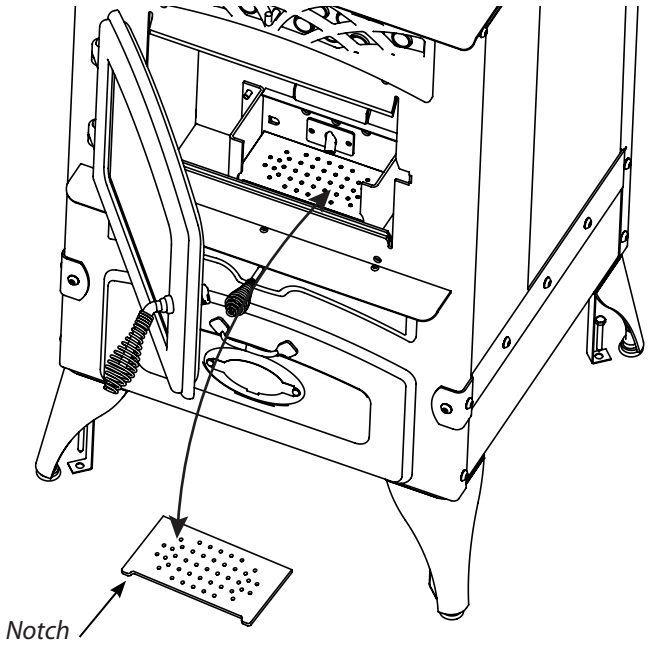


Figure 24: Removable fireplate. NOTE: notch should be toward the front of the stove.

- Remove firepot and fireplate and inspect. **SEE FIGURE 24.** Clean the holes in the firepot and plate sot hat they are free from any ash or debris. Keeping these holes clear of ash will allow the stove to get the proper air needed to burn clean and efficiently.
- Once the firepot and plate are removed, clean the surrounding surfaces so that they are free of unburned pellets and/or ash build-up. Be sure to clear the back ledge of the pot holder and the surface beneath the fireplate thoroughly.

Weekly Maintenance

- To clean the firepot area, remove the firepot by unscrewing the firepot cleaning rod from the firepot. Remove the rod and the firepot. Remove the fireplate by lifting it out of pot holder (**SEE FIGURE 24 ON PAGE 29**). Brush all of the ash from beneath the fireplate into the ash pan.
- Slide the top scraper rod in and out several times to clear the fly ash from the heat exchanger tubes. The ash will drop onto the heat shield (baffle).
- Remove the upper baffle and empty any ash or debris into an appropriate container. Replace upper baffle. **SEE FIGURE 25.**
- Empty fuel hopper of any fuel and vacuum empty hopper to remove any remaining debris. Use a dealer-approved ash vacuum.
- Remove ash pan. Empty into an appropriate container and replace.

  NOTE: A clean unit burns efficiently and will remain trouble free! CSW recommends the use of ash vacuums. See a dealer for more information.

Monthly Maintenance

- Remove side baffles using 3/8" wrench. Clean the heat exchanger tubes and the lower ledge near the ash pan of all fly ash.
- Vacuum exhaust manifold behind ash pan.
- Cumberland Stove Works recommends changing the air filter every 30 days. The air filter is found on the back of the unit. **SEE FIGURE 26.** Replacement filters can be ordered through your stove dealer. Clean air filter (730008); regularly replace if needed.

Seasonal Cleaning

- Remove all fuel from the hopper, firebox, firepot and ash pan. Run auger to clear any remaining fuel from the auger. It is important to clear the stove of all fuel at the end of the burning season, as corn and pellets can accumulate moisture over the summer months. This causes the unit to rust and/or the fuel to mold.
- Remove the combustion motor and clean impellers and motor housing of any fly ash.
- Vacuum the stove cavity to clear it of any fly ash or debris.
- Remove the exhaust venting and use a brush to clear all soot, ash and debris.
  NOTE: VENT MAY NEED TO BE CLEANED BI-ANNUALY OR EVERY 2-TONS OF FUEL BURNED, DEPENDING ON THE QUALITY AND AMOUNT OF FUEL USED.
- Inspect all rope gaskets around the front door and ash pan.

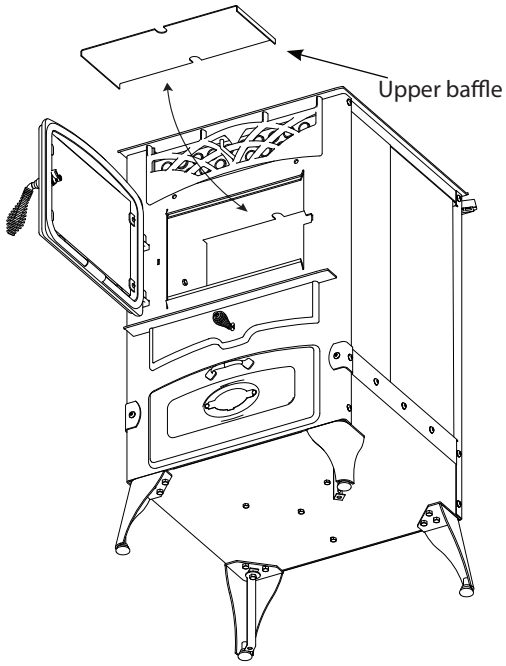


Figure 25: Upper baffle in top of firebox

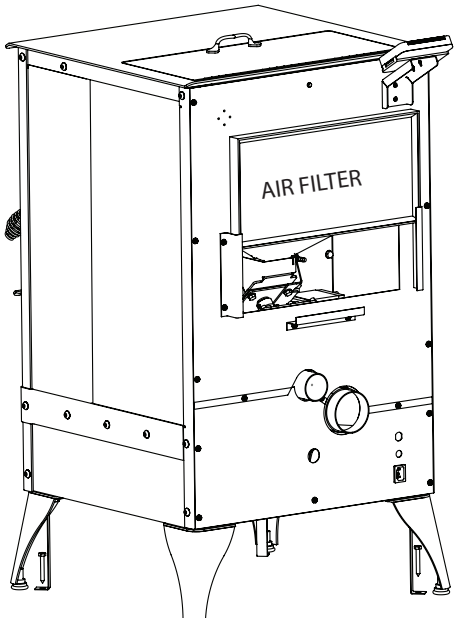


Figure 26: Air filter placement.

When the unit is cleaned out, empty the hopper, take the venting apart and clean out the fly ash. Then rinse and let dry. Inspect the draft blower and clean out all areas. Clean the glass, doors and outer cabinet so that you are ready for the next heating season. The use of an ash vacuum makes cleaning easier and faster.

REPLACING PARTS

Hopper Switch Kit (P/N 710013)
- Remove right side panel by reaching through the air filter opening with your right hand and pushing against the inside and outside of the side panel with both hands, lifting up and moving bottom of panel out then down.
- Separate the round spade terminals connecting hopper switch wires.
- Open the hopper lid, reach in, and push the switch up out of its holder.
- Remove the rubber grommet and feed the wires out of the holes.
- Feed the wires from the new switch back through the holes and replace grommet.
- Push the new switch into holder and plug back into wire harness.

Over Limit Switch (P/N 720085)
- Remove right hand side panel. The switch is located next to and slightly below the vacuum switch.
- Remove the spade terminals, remove the screws holding the switch using ¼" socket wrench.
- Install new switch and plug wire terminals from harness back onto switch.

Auger Over Temp Switch (P/N 720100)
- This switch is located on the lower left side of the auger housing near the lowest portion of the hopper.
- It is retained by a spring around the auger housing.
- It can be accessed through the air filter opening. Reach in and hold the switch with your left hand and unhook the spring with right hand. Unplug wires to remove switch.

Vacuum Switch (P/N 720073)
- This part can be easily accessed by removing the right side panel. It is located on the back of the firebox.
- It is retained with screws. Use a ¼" socket to remove them. Remove the vacuum hose that attaches to the brass nipple screwed into the firebox. Unplug wires to remove switch.

Auger and Auger Motor (P/N 710009 and 720079)
- The auger motor can be removed through the air filter opening. A single set screw holds the motor and can be removed with a 5/32" Allen wrench.
  NOTE: The auger motor has a flat side on the shaft and the set screw must be tightened on to the flat area or the motor could slip, affecting the feed rate thus damaging the auger shaft.
- The auger itself has 4 bolts retaining it.
- Remove the motor by removing the bolts using a 3/8" socket.

Igniter (P/N 730032)
- The igniter can also be removed through the air filter opening. It is located to the right of the auger housing.
- The igniter is held in place by the torque arm. The arm is adjustable to insure proper alignment to the firepot. It has a bolt and a nut that can be removed with a 3/8" socket.
- Pull the igniter out of the fire box.
- Pull off the hose going to the air pump motor.
- Clip the cable ties holding the wires and remove from the IM box and replace.

Air Pump (P/N 720072)
- The air pump motor can be replaced by removing the left side panel. Remove the 2 bolts holding the air pump mounting plate using 3/8" socket. Detach hose from air pump. Unplug wires from IM and remove air pump from mounting plate using phillips screw driver.
  NOTE: If the igniter is blue in color, this indicates poor air flow and may indicate an air motor problem and the igniter should be replaced. Make sure there are no kinks in the hose when reattached to igniter.

Combustion Motor (P/N 720078)
- This part is located behind the left side panel.
- The motor can be removed from the exhaust manifold using a 3/8" socket and extension.
- Clip the cable ties using a side cutter and remove the wires from the IM box to replace.
- ***NOTE: The combustion motor can be removed from its housing for service and cleaning without removing it from the manifold. There are (6) 11/32" nuts that hold the motor to the housing.***

Convection or Room Fan (P/N 720052)
- This part is located behind the right side panel and will require removal of the lower stove back to get to bolts.
- Use a 3/8" socket and extension.
- Clip the cable ties and remove the wires from the IM box to replace.

IM Box (P/N 730054)
- Remove the left side panel.
- Remove IM box using 5/16" socket.
- Remove the communication cord and lower gray plug.
- Plug both the cord and the plug into the new IM.
- Remove the spade terminals one at a time and plug into the new IM to keep them in the correct sequence.
- If there is any question, each component is listed on the IM box.

Firepot (P/N 710110) and Fireplate (P/N 710098)
- To remove the pot, unscrew the rod from the front of the firepot.
- Lift the Firepot up and out
- Lift the Fireplate up and out.
  NOTE: Be sure the notch in the fireplate is pointed out towards the door when reinstalling.

TROUBLESHOOTING & REPAIR

At Ardisam, we build quality and durability into the design of our products; however, no amount of careful design by us, and careful maintenance by you, can guarantee a repair-free life for your stove. Most repairs will be minor and are easily fixed by following the suggestions in the troubleshooting guide in this section.

The guide will help you pinpoint the causes of common problems and identify remedies.

For more complicated repairs, you may want to rely on your retailer, an authorized service center, or Ardisam, Inc. A parts catalog is included in this section.

We will always be glad to answer any questions you have, or help you find suitable assistance. To order parts or inquire about warranty, call or write us at the address found below, under the section "Ordering Replacement Parts."

ORDERING REPLACEMENT PARTS

Parts can be obtained from the store where the stove was purchased or direct from the factory. To order from the factory call, write or e-mail to:

Ardisam, Inc.
1160 Eighth Avenue, Cumberland, Wisconsin 54829
1-800-345-6007 • 1-715-822-2415
E-mail: info@ardisam.com

Please include the following information with your order:

1. Part numbers
2. Part description
3. Quantity
4. Model number and serial number

TROUBLESHOOTING GUIDE

Unplug stove before performing any maintenance.

⚠ WARNING

NEVER SERVICE OR TOUCH THE FEED AUGER WITH THE STOVE PLUGGED IN.

Problem	Display Status	Possible causes	Remedy
Stove Will Not Feed Pellets	NO READING	No power	Check to see if stove is plugged in
			Check communication cable
			Check electrical outlet for power
			Check fuse on incoming red power wire
		Defective control head	Test and replace control head if needed
	NORMAL READING	Hopper is empty	Add fuel to hopper
		Hopper lid is open	Close hopper lid
		Pellet and/or auger jam	Check auger for fines or pellet jam
		Auger motor failure	Replace auger motor
		Hopper switch failure	Bypass switch to test. Replace hopper switch if needed

Problem	Display Status	Possible causes	Remedy
Fire Goes Out or Stove Shuts Down	LOSS OF FIRE OFF TO RESET	Hopper is empty	Add fuel to hopper
		Poor quality fuel	Change fuel supplier/moisture test corn
		Power supply interrupted	Check power supply. Go through re-ignite sequence
		Plugged firepot	Clean firepot. Clear all holes of ash or debris
		Faulty POF switch	Replace POF switch
	OVERTEMP RESET SWITCH	Overtemp	Allow stove to cool and reset switch
		Loose connection on spade terminal	Check connections on switch and/or lower plug on IM
	AUGER OVERTEMP	Overtemp	Allow stove to cool and reset fuel shutoff.
		Loose connection on spade terminal	Check connections on switch and/or lower plug on IM
	VACUUM FAULT CHECK SEALS	Inadequate door seals	Check that rope seals are in working condition
		Front door is ajar	Close door securely
		Ash pan is ajar	Secure ash pan in its proper position
		Vacuum switch hose is loose/ disconnected, or switch is broken	Make sure vacuum switch hose is attached to the switch. Replace switch if necessary.
		Exhaust motor is failing to create vacuum	Put stove in test mode. Visually confirm motor is turning. Remove from housing and clean impellers and housing. Increase fan offset if necessary.

Contact service provider if above remedies fail. Contact your dealer or call CSW customer service at 800-345-6007.

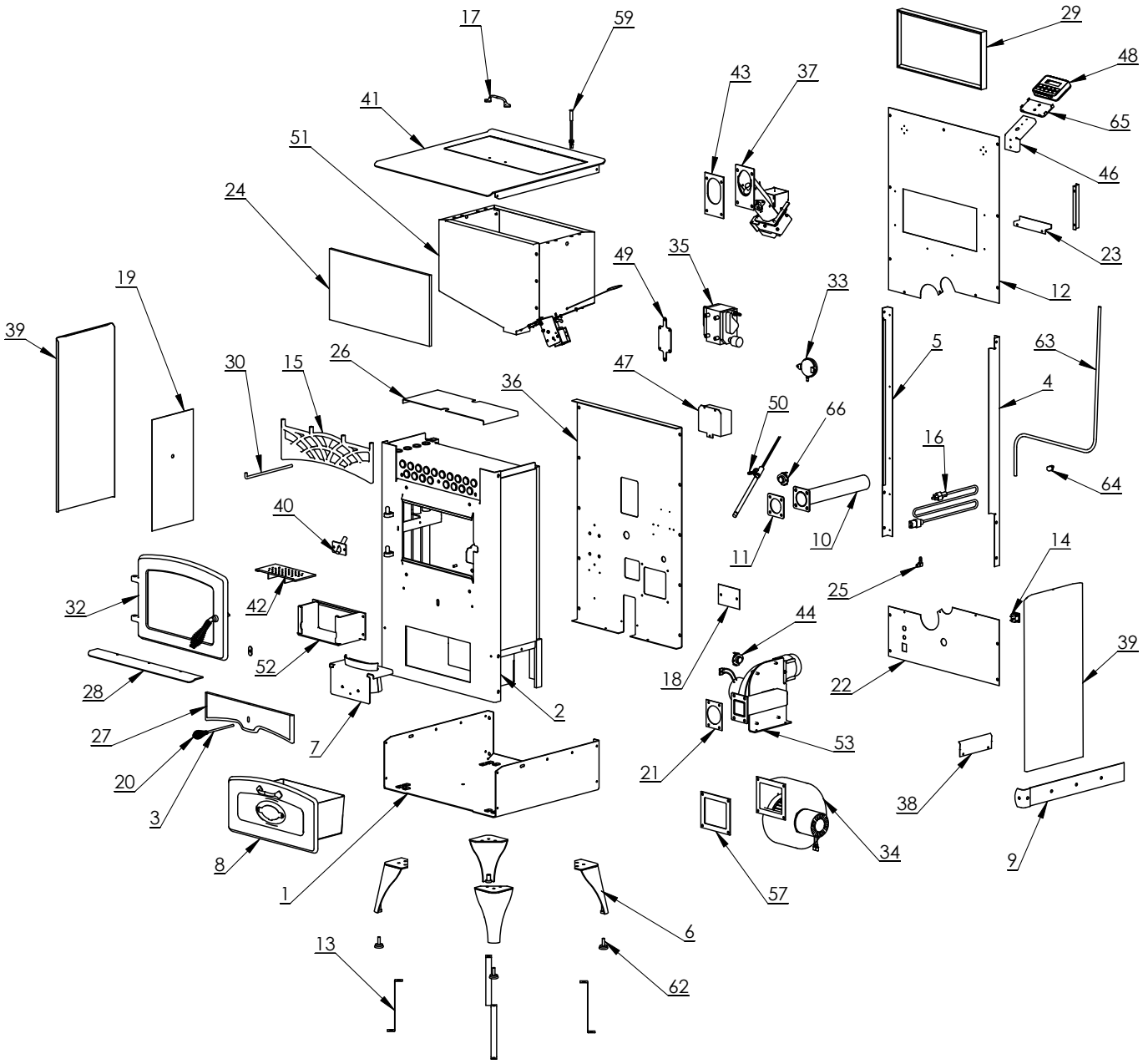
WARNING! Negative pressure in a home is a serious issue. If there is a problem, the stove should be installed with a Fresh Air Kit (not included).

Problem	Display Status	Possible causes	Remedy
Stove Will Not Light	NORMAL READING	Hopper is empty	Add fuel to hopper
		Plugged firepot	Clean firepot. Clear all holes of ash or debris.
		Igniter slipped out of torque arm	Push igniter back into place
		Igniter failed	Test igniter output leads on IM. Confirm air pump operation. Replace igniter if needed.
		No power to igniter	Replace IM
	NO PROOF OF FIRE PUSH "ON" TO START	Igniter failed	Test igniter output leads on IM. Confirm air pump operation. Replace igniter if needed.
Pot Loading Pellets	NORMAL READING	Plugged firepot	Clean firepot. Clear all holes of ash or debris.
		Poor quality fuel	Change fuel supplier/moisture test corn
		Firepot misaligned	Make sure firepot is aligned properly and that there is no unburned pellets obstructing proper alignment of firepot.
Pot Loading Corn*	NORMAL READING	Over-moist corn or high sugar content	Push material down using a metal poker. Run at Level 6 in Range 1 for an hour, then increase to Range 2.

Problem	Display Status	Possible causes	Remedy
Lazy Flame	NORMAL READING	Poor quality fuel	Change fuel supplier/moisture test corn
		Firepot and plate require cleaning	Clean firepot and plate. Clear all holes of ash or debris.
		Firepot misaligned	Make sure firepot is aligned properly and that there is no unburned pellets obstructing proper alignment of firepot.
		Fireplate in backwards	Adjust fireplate for correct positioning. Fireplate notches should always face towards the front door of the stove.
Smell of Smoke in Room	NORMAL READING	Exhaust vent is not sealed properly	Seal all joints of exhaust vent with high-temperature silicone sealant.

*** The stove will burn over-moist corn if the fire pot can be brought up to operating temperatures. This may require rattling the pot or pushing the material down with a poker and/or cycling the igniter an additional time.**

MAIN ASSEMBLY PARTS

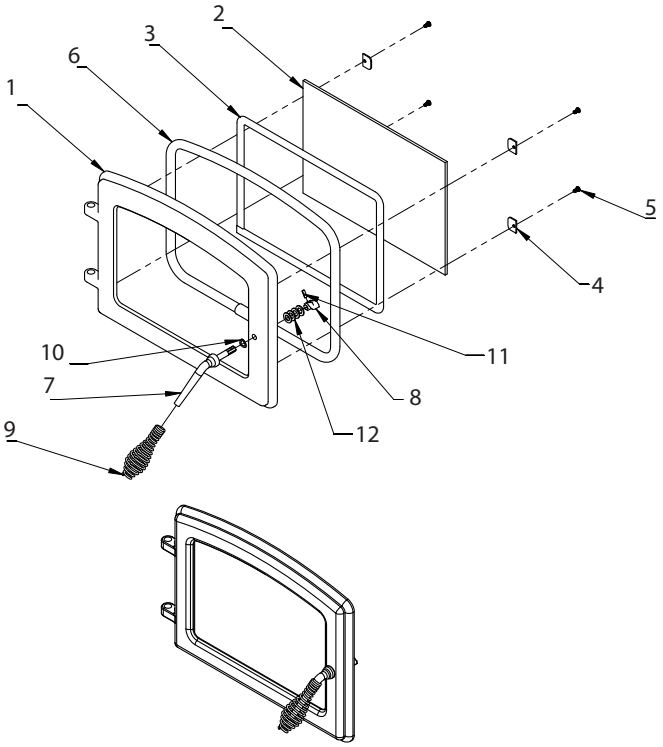


MAIN ASSEMBLY PARTS

KEY #	PART #	DESCRIPTION	QYT.
1	710042	BASE	1
2	710106	FIREBOX W/AIRWASH	1
3	700076	POT CLEANING ROD	1
4	700250	RIGHT UPRIGHT	1
5	700300	LEFT UPRIGHT	1
6	710008	FOOT	4
7	710110	FIREPOT	1
8	710053	ASH PAN ASSEMBLY	1
9	700147	STRAP	1
10	710057	INTAKE PIPE	1
11	730020	GASKET INTAKE	1
12	700335	UPPER STOVE BACK	1
13	700136	FLOOR STRAP	4
14	720044	AC INLET-OUTLET	1
15	700170	GRILL (GOLD, BLACK OR SILVER)	1
16	720045	POWER CORD	1
17	730006 730044	HOPPER/ASH PAN HANDLE (GOLD) HANDLE (SILVER)	1
18	700365	DUCT COVER	1
19	700189	LEFT/RIGHT BAFFLE	2
20	720053 730042	CLEANING ROD SPRING (GOLD) CLEANING ROD SPRING (SILVER)	1
21	730015	GASKET INBOARD AUGER	1
22	700337	LOWER STOVE BACK	1
23	700195	FILTER BRACKET	3
24	730031	HOPPER INSULATION	1
25	720034	90 DEGREE FITTING	1
26	700202	UPPER BAFFLE	1
27	700163	SHELF BASE	1
28	700144	SHELF	1
29	730008	FILTER	1
30	700206	SCRAPER ROD	1
32	710095	GLASS DOOR ASSEMBLY	1
33	720073	VACUUM SWITCH	1
34	720052	CIRCULATING BLOWER	1
35	720072	AIR PUMP	1
36	700257	CIRCULATING AIR DUCT	1
37	710108	AUGER ASSEMBLY	1
38	700286	SPRING CLIP	1
39	700269	SIDE PANEL	2

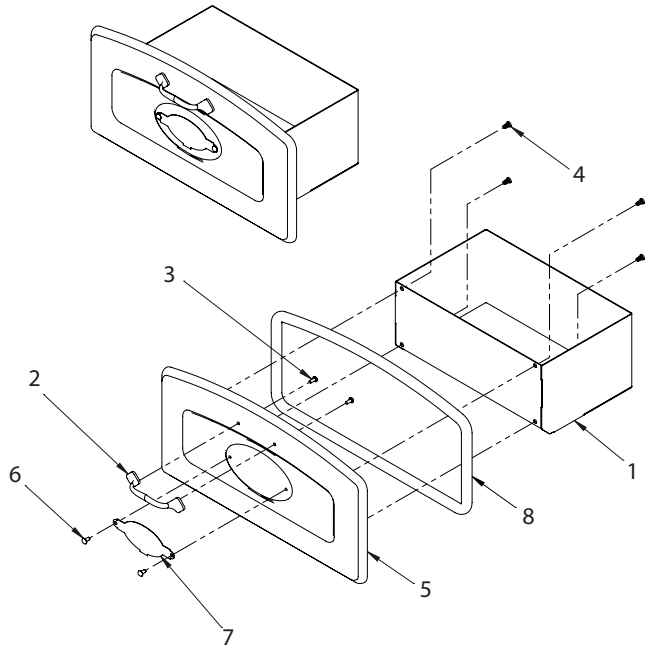
KEY #	PART #	DESCRIPTION	QTY.
40	710116	IGNITER PLUG (3700 ONLY)	1
41	710097	STOVE TOP	1
42	710098	FIREPLATE	1
43	730067	OUTBOARD AUGER GASKET	1
44	720015	PROOF OF FIRE SWITCH	1
46	700349	CONTROLLER BRACKET	1
47	730054	IM (INTERFACE MODULE)	1
48	730053	DISPLAY	1
49	700368	AIR PUMP PLATE	1
50	730032	HEAT TORCH	1
51	710010	HOPPER	1
52	710115	POTHOLDER	1
53	710103	EXHAUST MANIFOLD	1
57	730066	CIRC. BLOWER GASKET	1
59	710013	KIT HOPPER SWITCH REPLACEMENT	1
62	725010	ADJUSTABLE GLIDE	4
63	720086	DISPLAY CABLE	1
64	720088	STRAIN RELIEF	1
65	700035	BRACKET DISPLAY	1
66	720085	SWITCH-HIGH LIMIT	1
ITEMS BELOW NOT SHOWN			
--	8932	NUT 1/4-20 HKPSBW ZN	
--	725017	NUT #10-24 HKPSBW ZN	
--	1501A	BOLT 5/16-18 X 3/4 HH GR5 ZN	
--	503	BOLT 5/16-18 X 1-1/2 HH	
--	63118	BOLT 1/4-20 X 1/2 HHCS GR5 ZN	
--	725005	SCREW 1/4-20 X 1/2 TRUSS HD TORX	
--	725000	BOLT 10-24 X 3/8 TBHMS GR2	
--	725012	BOLT 8-32 X 3/8 PPHMS GR2 ZN	
--	725007	SCREW SLHH SHEET METAL	
--	509	BOLT 1/4-20 X 1/2 SLHWH ZN F-T T/C	
--	725015	SCREW 1/4 X 2 LAG HH	
--	725013	SCREW #6-20 X 3/4 PPH ZN	
--	700034	STUD 10-24 X 3/4 STNLS FT	
--	725016	SCREW #14 X 1/2 PTH BLK ZN	
--	53611	NUT 5/16-18 H GR5 ZN	
--	740001	WIRING HARNESS	

GLASS DOOR PARTS (710095)



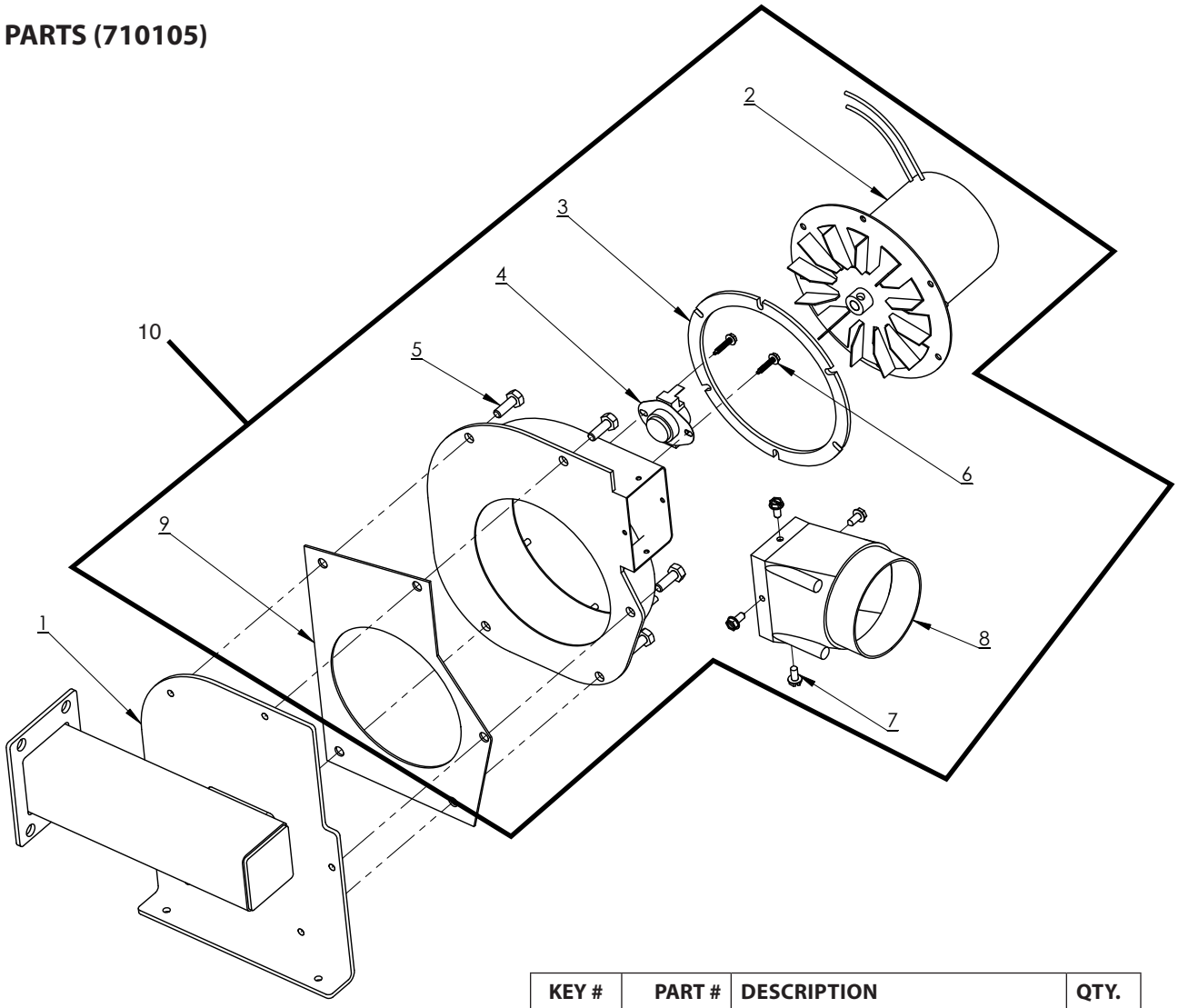
KEY #	PART #	DESCRIPTION
1	700311	DOOR CASTING
2	720002	GLASS
3	720075	WINDOW GASKET ROPE
4	700200	GLASS CLIP
5	725000	BOLT 10-24 X 3/8 TBHMS GR2 BLK ZN F-T
6	700398	GASKET MAIN DOOR
7	700351	DOOR HANDLE
8	700359	DOOR HANDLE COG
9	720009 730043	DOOR HANDLE SPRING (GOLD) DOOR HANDLE SPRING (SILVER)
10	725023	DISC SPRING
11	725026	ROLL PIN
12	725024	SPACER WASHERS

ASH PAN PARTS (710053)



KEY #	PART #	DESCRIPTION
1	710099	ASH PAN
2	730006 730044	HANDLE, ASH DOOR (GOLD) HANDLE, ASH DOOR (SILVER)
3	725012	BOLT 8-32 X 3/8 PPHMS GR2 ZN F-T
4	725000	BOLT 10-24 X 3/8 TBHMS GR2 BLK ZN F-T
5	700146	ASH DOOR
6	725008	SCREW #10 X 3/8 RH U-DRIVE BLK ZN SPIRAL
7	730012	PLATE, LOGO
8	720025	GASKET, ASH DOOR

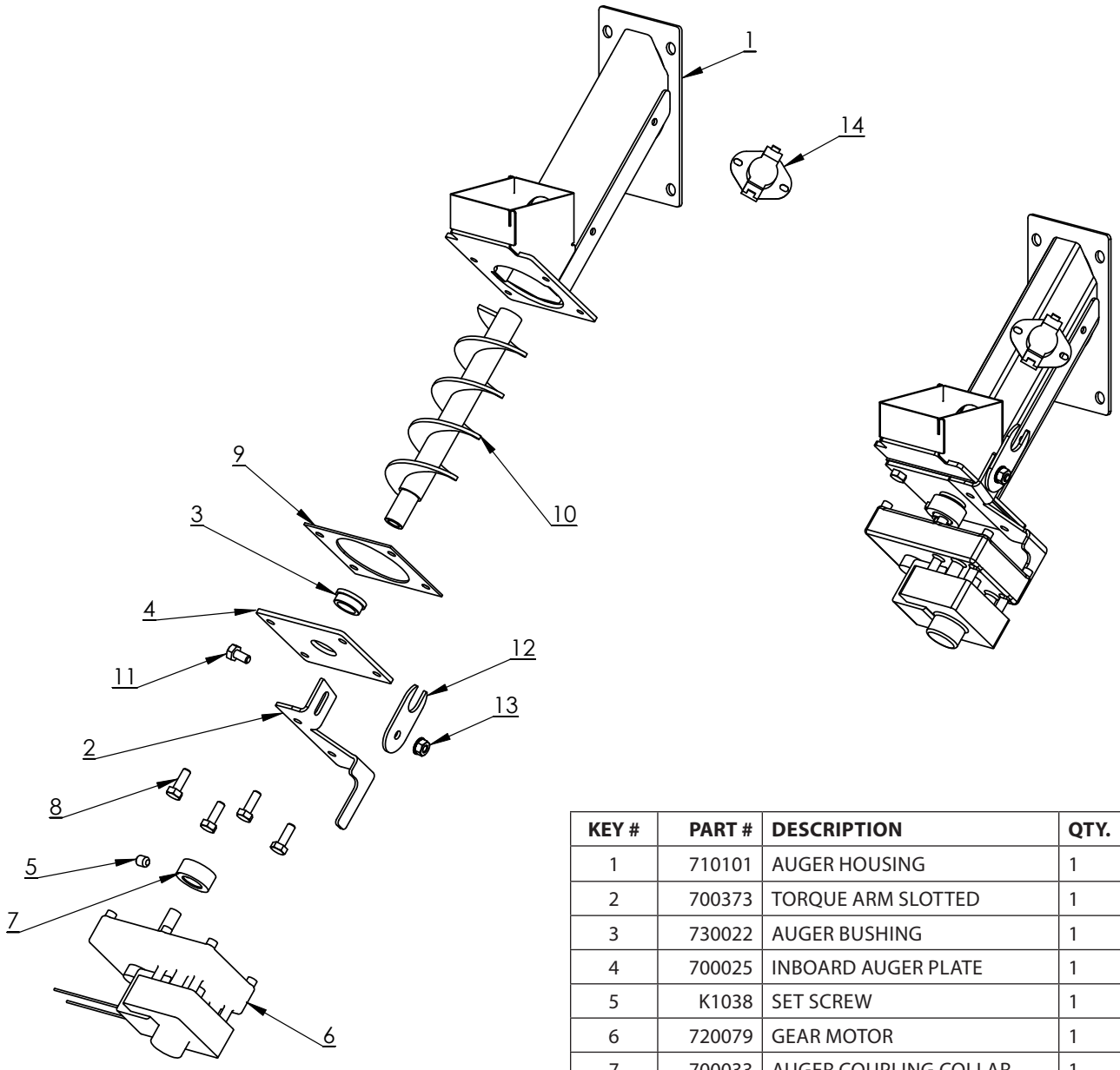
EXHAUST PARTS (710105)



KEY #	PART #	DESCRIPTION	QTY.
1	710103	EXHAUST MANIFOLD	1
2*	720060	MOTOR AND FAN	1
3*	720059	COMBUSTION MOTOR GASKET	1
4*	720015	SWITCH, SNAP DISC	1
5*	700057	BOLT 1/4-20 X 3/4 SLHWH TF GR8 ZN	5
6*	725014	SCREW #6-20 X 3/4 SHHSD ZN	2
7*	725007	SCREW #10 X 3/8 SLHNNZN	4
8*	720056	SQUARE TO ROUND TRANSITION CASTING	1
9*	720021	COMBUSTION BLOWER GASKET	1
10	720078	COMBUSTION MOTOR AND FAN ASSEMBLY (KEYS 2-9)	1

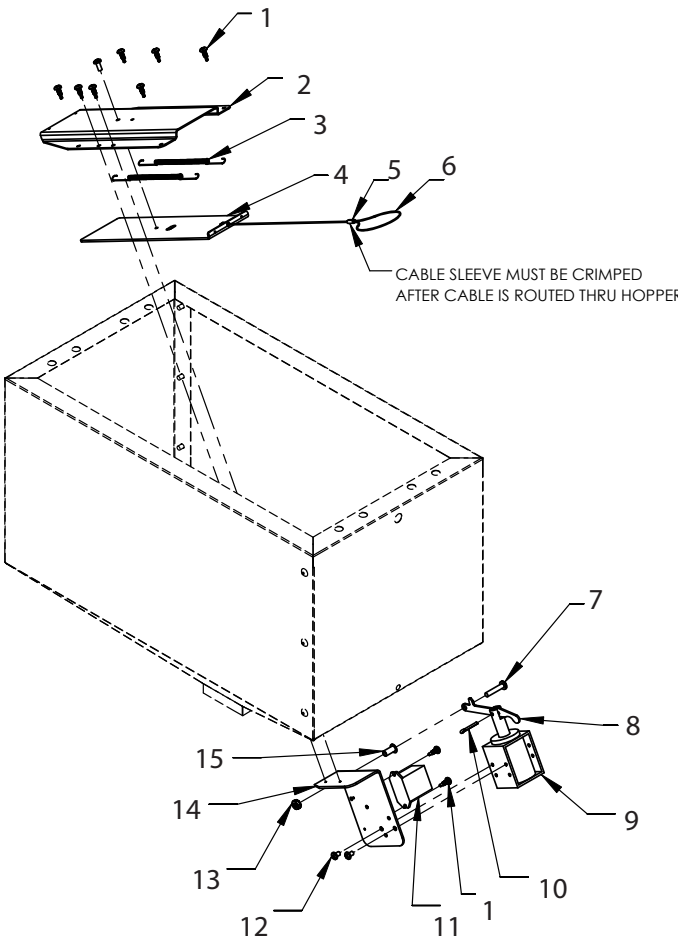
*Key #s 2-9 are also a part of Key #10, the Combustion Motor and Fan Assembly.

AUGER PARTS (710108)



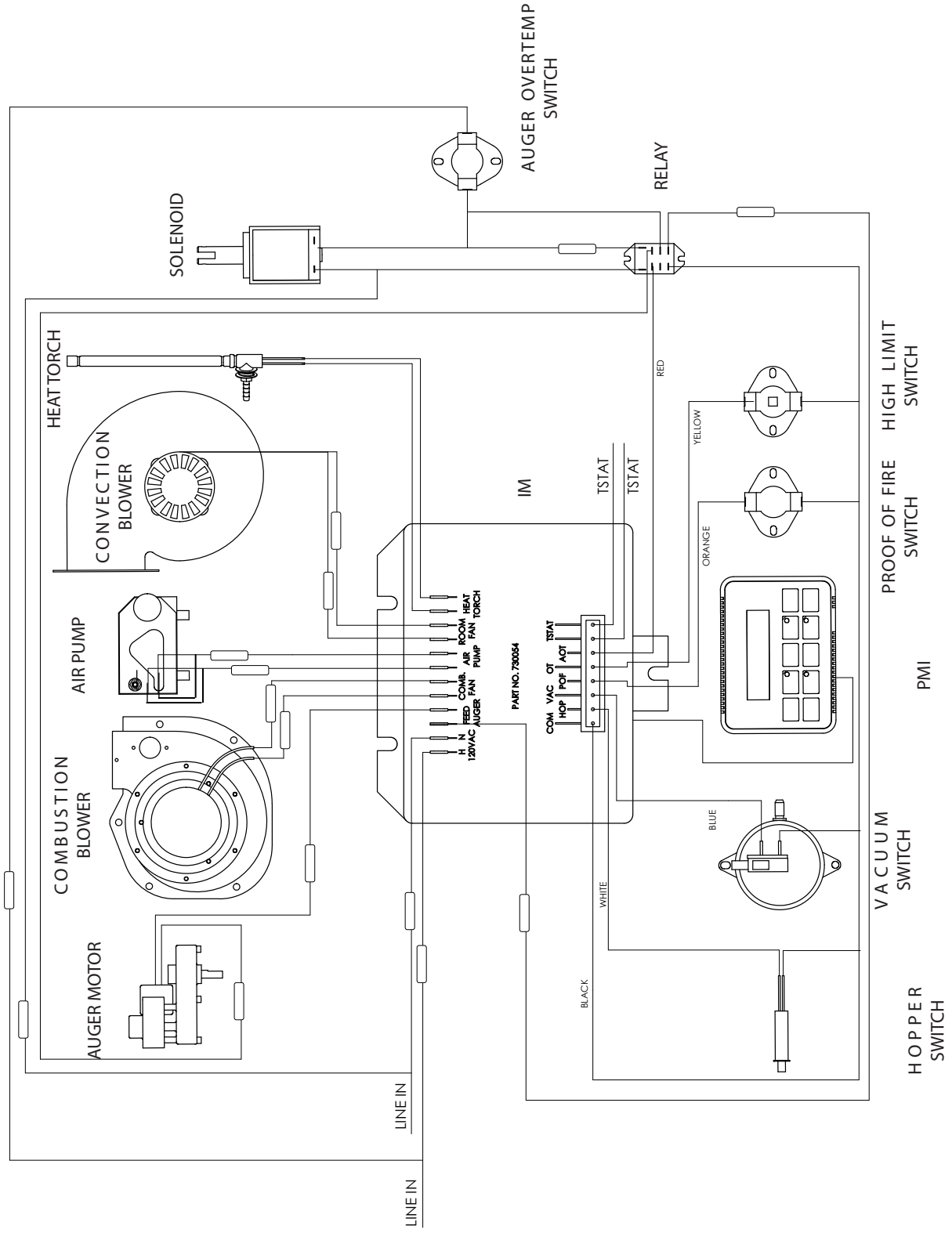
KEY #	PART #	DESCRIPTION	QTY.
1	710101	AUGER HOUSING	1
2	700373	TORQUE ARM SLOTTED	1
3	730022	AUGER BUSHING	1
4	700025	INBOARD AUGER PLATE	1
5	K1038	SET SCREW	1
6	720079	GEAR MOTOR	1
7	700033	AUGER COUPLING COLLAR	1
8	700057	BOLT 1/4-20 X 3/4 SLHWH TF GR8 ZN	4
9	730015	GASKET INBOARD AUGER	1
10	710009	WELDMENT AUGER	1
11	63118	BOLT 1/4-20 X 1/2 HHCS GR5 ZN	1
12	700375	PLATE ADJUSTABLE IGNITER FORK	1
13	8932	NUT 1/4-20 HKPSBW ZN	1
14	720100	SWITCH SNAP DISC	1

FUEL SHUT OFF



KEY #	PART #	DESCRIPTION	QTY.
1	725029	SCREW #8-18 X 1/2 PPHSD ZN	9
2	700420	COVER PANEL	1
3	720084	SPRING HIGH LIMIT SWITCH	2
4	700421	SLIDE FUEL SHUT OFF PANEL	1
5	700425	SLEEVE	1
6	700424	CABLE FUEL SHUT OFF PULL	1
7	67537	BOLT 10-24 X 1 PPH	1
8	700422	TRIGGER FUEL SHUT OFF	1
9	720203	SOLENOID FUEL SHUT OFF	1
10	725034	PIN COTTER	
11	720202	FUEL SHUT OFF RELAY	1
12	725032	BOLT #8-32 X .25 PPHMS GR2 ZN	2
13	725017	NUT #10-24 HKPS STNLS	1
14	700423	MOUNT FUEL SHUT OFF BRACKET	1
15	10450	NUT 10-24 FLANGE RIB NUTSERT	1

WIRING DIAGRAM



NOTES

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